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THE SILVER SITUATION

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THE SILVER SITUATION

IN THE

UNITED STATES.

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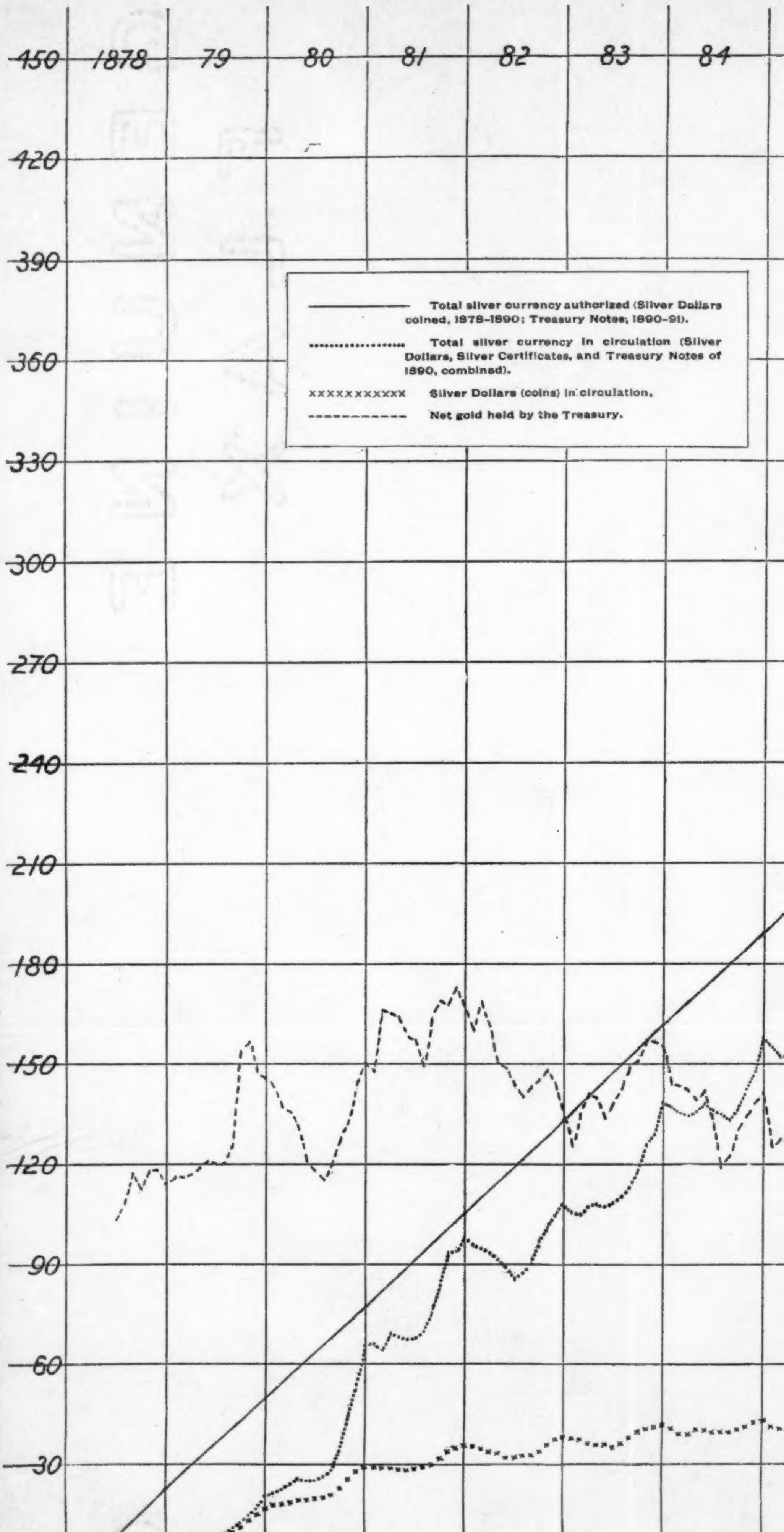

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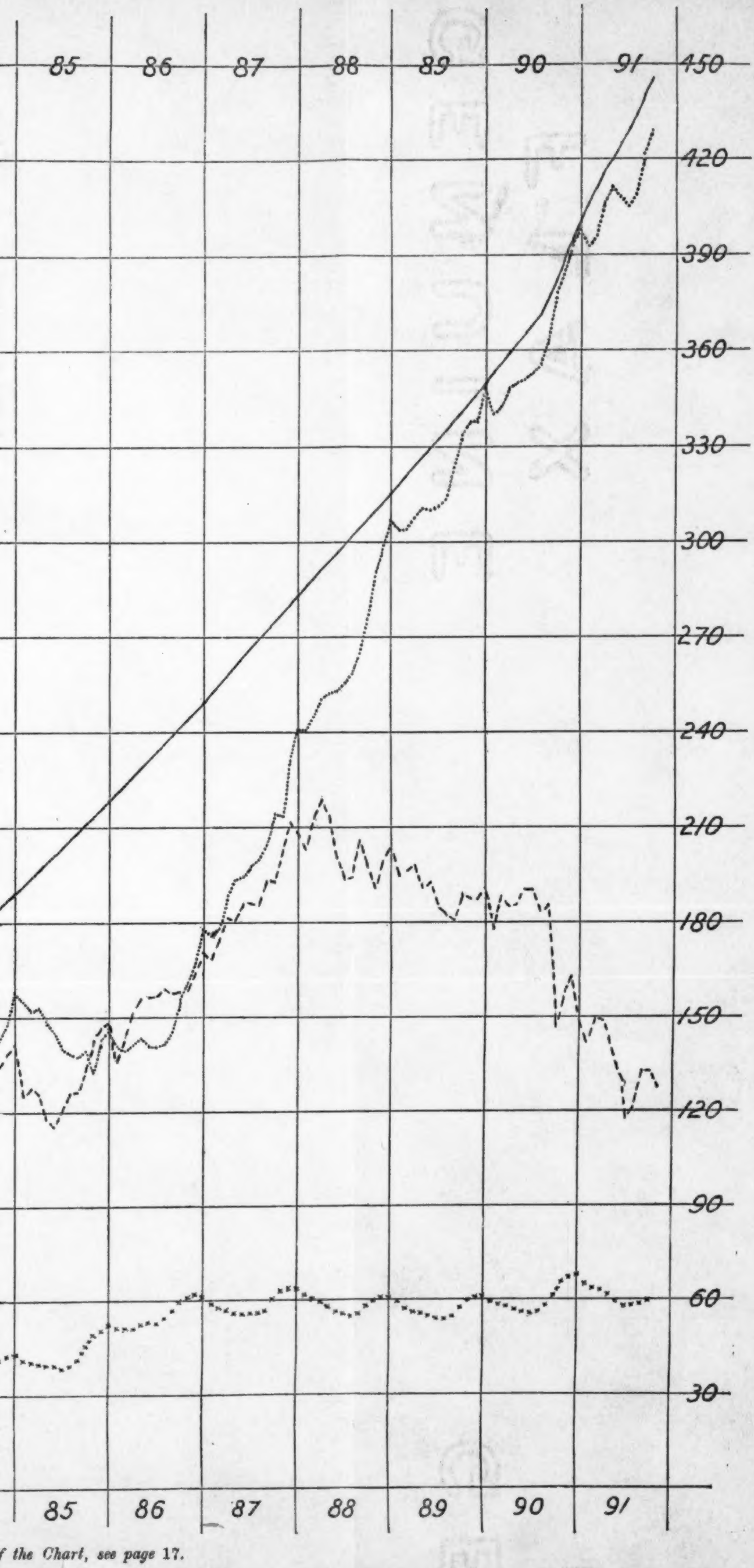

f the Chart, see page 17.

The Silver Situation in the United States.

PART I.

THE ECONOMIC SITUATION.

I.—The Act of 1878.

A discussion of the silver situation in the United States divides itself naturally into two parts. On the one hand, we have the purely economic aspects of the problem,—the working of the silver legislation, its history, the results that have flowed from it in the past or may be expected in the future. On the other hand, we have the intricate and difficult questions of policy involved,—the right and wrong of the legislation, the evils or benefits that have ensued and may be expected, the best course to be followed in view of all the emergencies of the situation; the treatment of the problem not only from the economic, but from the wider social and political point of view. Here, as in almost every subject which the economist has occasion to examine, it is advantageous to distinguish between these two classes of considerations. Accordingly, the present monograph will discuss them separately, undertaking first an examination of the economic phenomena, and proceeding thence to a discussion of the questions of policy.

The economic discussion may begin with a sketch of the history of legislation, which can be disposed of very briefly. It is not necessary to go back further than the act of 1878, familiarly known as the

Bland Bill. Although the silver dollar of which the coinage was resumed in 1878 dates back as a coin to the earlier days of the Republic, its reissue in that year marks a policy so radically new that the experience of previous years throws practically no light on its working. The act of 1878[1] provided for the purchase by the government, each month, of not less than two million dollars' worth, and not more than four million dollars' worth of silver bullion, for coinage into silver dollars at the rate of 412½ grains of standard silver (or 371¼ grains of fine silver) for each dollar.[2] The amount of the purchases, within the specified limits, was left to the discretion of the Secretary of the Treasury. As every Secretary of the Treasury, throughout the period in which the act was in force, kept to the minimum amount, the practical result was a monthly purchase of two million dollars' worth of silver bullion.

The act is sometimes described as having called for a monthly issue of two million silver dollars; but this was not the exact situation. The amount of silver obtainable with two million dollars obviously varies according to the price of the metal in terms of the dollars with which the purchases are made. In February, 1878, when the first purchases were made, those dollars were the inconvertible United States notes, or greenbacks, worth something less than their face in gold. The amount of silver bullion obtainable with two million such dollars depended, on the one hand, on the price of silver bullion in

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[1]On the general history, up to and including the act of 1878, the reader should consult Professor J. L. Laughlin's *History of Bimetallism in the United States* (New York 1885).

[2]The text of the act is conveniently found in Dunbar's *Laws of the United States relating to Currency, Finance and Banking*, p. 246.

terms of gold, and on the other hand on the value of the dollars themselves in terms of gold. When specie payments were resumed, on the first of January, 1879, and the greenbacks became redeemable in gold, the measure of value in the United States became gold, and the extent of the coinage of silver dollars under the act of 1878 became simply a question of how much silver bullion could be bought with two million dollars of gold. The price of silver in 1878 was, in terms of gold, not far from a dollar for an ounce of standard silver. Since 1878 it has gone down almost steadily, and at its lowest, in 1889, was barely above 80 cents an ounce.[1] The silver dollar of 412½ grains contains less than an ounce (480 grains) of standard silver. The monthly purchase of two million dollars' worth of silver has therefore always yielded more than two million silver dollars, the amount being obviously greater as the price of silver went lower. On the average, the monthly yield has been not far from two million and a half of silver dollars. So much each month, therefore, or thirty millions of silver dollars a year, was roughly the addition to the currency of the community from the act of 1878.

An important provision of the act of 1878 was that authorizing the issue of silver certificates against the deposit of silver dollars. This authority was limited at the time to certificates in denominations only of ten dollars and upward: a restriction which, as we shall see, proved to be of great importance. At

[1] I have stated the price here, for simplicity, in terms of so much per ounce of standard silver, *i. e.*, silver containing 10 per cent. of alloy. The usual quotation in the United States is per ounce of fine silver.

the time it does not seem to have been expected that the silver certificates would enter directly into the circulating medium; we may infer from the restriction to large denominations that no such expectation was entertained. But in fact, it has been chiefly in the form of certificates that the silver has entered into circulation. These certificates, it is true, are not, like the dollars themselves, a legal tender; but they are receivable for all public dues, customs included, and they pass from hand to hand at least as readily as the bulky pieces which they represent. The government pays them out directly, retaining an equal amount of silver dollars in its vaults, and treating these as a special deposit by the holders of the certificates. The quantity of actual coined dollars which the community would use reached an early and stubborn limit; but in the form of certificates, much wider play was given to their use. The dollars and certificates between them constitute what we may call the silver currency of the act of 1878.

The passage of that act was due to causes easily described. It was part of the opposition to the contraction of the currency and the resumption of specie payments, which forms the most important episode in our financial history between 1867 and 1879. The resumption of specie payments had been provided for by the act of 1875, and was to take place on January 1, 1879. In the meanwhile, the long-continued depression which followed the crisis of 1873 intensified the demand for more money and higher prices. That demand led to the inflation bill passed by both Houses of Congress in 1878, and killed by the veto of President Grant. The same

feeling led to the silver act. The great fall in the price of silver, beginning in 1873, and showing itself markedly in 1876, made silver, at the old ratio, a cheaper currency than gold, and so caused the opponents of the return to specie payments to prefer silver to gold, as they preferred paper to either. No doubt some additional force was given to the movement in favor of the use of silver from the desire of the silver mining states and their representatives, that the price of the metal should be kept up through a larger use of it for coinage. But this element, while sometimes prominent in the agitation, was not then, as it has not been in more recent years, of any great importance by itself. The real strength of the agitation for the wider use of silver as money comes from the conviction of large masses of the people that the community has not enough money: a conviction which may be fostered by the selfish interests of mine-owners, and doubtless has often been based on arguments ludicrously fallacious, but which rests, nevertheless, on a foundation not entirely selfish, and has some support from economic reasoning that deserves candid and attentive discussion.

Although the specific measure passed in 1878 thus rested on a long train of historical causes, it contained details that were essentially new, not only in our own experience, but in that of the world at large. It provided for the injection into the currency of a large annual increment of over-valued coin. It did not establish bimetallism proper; for the coinage of silver was not free, but was undertaken by the government on its own account, the Treasury reaping the profit which would accrue so long as the coins were kept at a higher value than

that of the bullion put into them. It did not establish anything like a subsidiary coinage; for the new coins were legal tender to an unlimited amount, and no attempt was made to adjust their quantity to the needs of the community for the convenience of small change. It simply provided for a regular mechanical addition of large amount to the general circulating medium. No precise experiment of this kind had ever before been tried. It is true that Germany and the countries of the Latin Union possess, in their circulating medium, large quantities of over-valued thalers and five-franc pieces which are exactly like our silver dollars. They also are legal tender without limit; their total quantity is limited; and it is only by this limitation of the quantity that their value is kept above that of the bullion contained in them. But the thalers and francs in these countries are not new additions to the currency. They are remnants from an earlier period, when Germany had a silver standard, and the Latin Union a complete bimetallic standard. No addition whatever to the thalers is made in Germany; and if some coinage of five-franc pieces takes place in France and in other countries of the Latin Union, the additions are meant merely to fill the place of abraded coins, to provide for the ordinary losses from daily use, and to make any additions to the supply which may be needed for convenience in making small change. No other country has ever entered on an addition of over-valued coin to its circulating medium having the object and extent of that made by our silver act of 1878. This characteristic of the measure, it need hardly be said, was the result not of any deliberate intention to try a new experiment, but of the spirit

of compromise which explains so many anomalies in the legislation of democratic communities. The silver act, as passed by the House of Representatives, provided for complete bimetallism,—for the free and unlimited coinage of the silver dollar at the old ratio of 16 to 1. In the Senate, it was amended by the substitution of the provisions for a limited coinage, which were finally enacted. The compromise was meant to satisfy both those who objected to the cheaper standard and those who wanted more money; and it afforded a welcome escape to the legislators who were trying to satisfy all parties. At the time, no one probably expected that the measure would remain in force for any great length of time. The conservative element hoped that it would be repealed after a short trial; the inflationists (for by that name they might, then at least, fairly be called) believed that it would soon be superseded by the free and unlimited coinage of silver. As it happened, the act remained in force, unamended, and indeed without very serious attempt at amendment, for over twelve years; and the measure which succeeded it in 1890, though different in many details, followed the same method of forcing a large regular injection into the circulating medium of money based on silver purchases by the government.

On the general principles which are expounded in standard books on political economy, the effects of this novel experiment were not difficult to predict. Each new dose of silver money would push out,—after the resumption of specie payments had taken place,—an equivalent amount of gold. This process would continue until all the gold in circulation had disappeared. So long as any gold money was left in

the country, gold and silver would circulate side by side, and the silver dollars would be equal in value to the gold dollars. After the gold had disappeared, silver alone would be the basis of the monetary system. Prices would accommodate themselves to the new measure of value, and would become somewhat higher than they had been under the gold standard. If thereafter the government still continued to coin and issue the annual increment of silver, the effect would be simply a corresponding outflow of silver from the country.

Something of this sort was probably expected at the time by most persons familiar with economic reasoning; and such doubtless would have been the working of the measure if no complicating forces had intervened, and if the effects of an increased issue of money had proved to work themselves out with that mechanical simplicity which is assumed in the usual statements of the theory of money and of prices. But neither of these conditions has been fulfilled. Complicating forces have, in fact, intervened. There have been changes in other parts of the circulating medium, and great changes in the general economic conditions of the community, which must necessarily have modified to a great extent the expected effects, even if the second assumption, of mechanical simplicity in operation, had held good. But this second assumption also has proved to need important correction. Our experience under the act of 1878 has shown that, in this class of economic phenomena as in others, the working of the economic forces is far from simple. The clear-cut fundamental doctrines, while they remain true at bottom, and while they are confirmed by experience

in the long run, need correction and qualification such as experience alone can supply. For this reason, the actual working of the act of 1878 is of interest not only as a matter of present political interest, but as a lesson of permanent instruction for the economist. The sort of corrections of accepted doctrines which are supplied by our experience will be explained in detail in due time; but it may not be amiss to state at the outset that the modifications by no means destroy the validity of the accepted conclusions. They rather supplement them, and show with what variations they apply under new conditions. The general theory of money, as worked out by Ricardo, and expounded on his lines by every writer of note since his time, remains intact; but something is added to it, and, more particularly, the need of care and discretion in making predictions based on it, is illustrated to perfection.

II.—The Silver Circulation.

So much by way of preface. Turning now to the actual working of the act of 1878, the first fact to be noted is the attitude of the banks to the silver currency, which has been and is a factor of prime importance. From the outset, the banks, especially in the large cities of the East, have fought shy of the silver money. They have been unwilling to use large quantities of it, and still more unwilling to allow large quantities to accumulate on their hands. This disposition no doubt may be ascribed in part to their close connection with the creditor class, to whom a lowering of the standard of value must be objectionable. But in good part it is due to causes of a

different sort. The desire for a steady and unvarying basis for credit transactions results naturally from the conditions of the banker's business; and all transactions connected with foreign trade must of necessity rest on a gold basis. Not least important is the simple public-spirited preference for gold as the better standard of value in the interests of the community at large—a preference, to be sure, which rests on tradition quite as much as on a clear weighing of the merits of the case. At all events, in November, 1878, shortly after the passage of the silver act, and immediately before the resumption of specie payments, the banks of the New York clearing house adopted a rule prohibiting "the payment of balances [*i. e.*, between banks at the clearing house] in silver certificates or silver dollars, except as subsidiary coin in small sums (say under ten dollars)."[1] In 1882, Congress tried to break up the practice so established by inserting in an act of that year, for extending the corporate existence of national banks, a proviso that no national bank should be a member of a clearing house at which silver certificates were not receivable in payment of balances. The rule of November, 1878, was therefore dropped by the New York banks. But their

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[1] These rules are printed in the Comptroller's report, in *Report on the Finances* for 1878, p. 169. It is there stated that the Boston banks adopted the same rules; but the practice of the Boston banks did not become settled until after the events of 1885, to which reference is made below, at p. 31.

The usage of the banks in the West varies from that of the Eastern banks. Philadelphia follows the example of New York and Boston in the refusal to use silver currency. But in Chicago, St. Louis, Kansas City and Denver, silver certificates, and bank notes as well, pass between banks as freely as any form of currency, though in fact no large amounts are used.

practice remained unaltered. Congress can compel a national bank to receive silver certificates, but cannot compel it to offer them. The banks have by tacit consent refused to make the tender. In fact, the silver currency has not been allowed to enter into transactions between banks.

The banks did not "boycott" the silver currency, as it has sometimes been put. They received it on deposit, and accepted it in tender of debts when offered. But they endeavored to hold as little of it as possible. They paid it out, first from the cash flowing through their hands, and still so pay it out. If the silver dollars or certificates which accumulate on their hands were not carried off by the calls for cash from persons presenting checks, the excess was got rid of in another way. Both silver dollars and certificates are receivable for all public dues, customs included; and when they began to accumulate in the banks, they were turned over to the Treasury, chiefly through the hands of importers and custom house brokers who have payments to make for customs dues. The signal importance of this attitude of the banks will soon appear.

The history of the working of the silver currency is most easily followed on the chart appended to this paper, which is continued as nearly as may be to the present time, and therefore bears on the act of 1890 as well as on that of 1878. The part of the chart to which the reader's attention is chiefly called is the irregular dotted line, which begins at the bottom on the left hand, and ascends irregularly and steadily athwart the page. It indicates the amount of silver currency (dollars and certificates added together) actually in circulation from month to month. Above

it runs an unbroken line, almost straight, which soars up the page without a break, and indicates the total coinage under the act of 1878. After July, 1890, this straight line stands for the issues under the act of 1890, which will be described in its place in the pages to follow. It will be noticed that the rate of increase is markedly greater in 1890, in consequence of the legislation of that year; and also that the increase is more irregular, a change due to the rapid fluctuations in the price of silver in the latter part of 1890. Still another important line is the broken one which runs across these two, and represents the net amount of gold held by the United States Treasury. The fluctuations which it indicates are marked, and some of them,—especially for 1884-85 and 1890-91,—are of much significance. Of least importance, though of interest as a matter of curiosity, is the lowest line, of asterisks, which represents the amount of actual silver dollars in the hands of the public.

Certain preliminary points suggested by this chart may be disposed of, before proceeding to the more important general features which it indicates. Looking at the line which represents the amount of silver currency in actual circulation, we observe a very distinct increase in the outgo or circulation of silver in the latter half of each year. That increase shows itself regularly, even in years like 1885, when the general movement was strongly toward a reduction in the volume outstanding. In the first half of each year, on the other hand, there is either a decline or a distinct retardation of the rate of increase. These regular fluctuations are clearly due to what is called "moving the crops,"—the flow of currency to the

West and South, to effect of exchanges which accumulate at the time when the staple agricultural products pass from the hands of the farmers and planters. The steadiness of this particular phenomenon, maintaining itself throughout the irregularities of the general movement, points to a conclusion of which ample confirmation will be found in other directions: that the outgo of silver money into circulation has by no means proceeded with that regularity which the legislature expected and intended, but has been very greatly affected by circumstances beyond legislative control.

Another point, of some interest though of no great importance, is the circulation of the actual coined dollars, which is represented by the lowest line of the chart. In one respect, their circulation follows those fluctuations which have just been noted in the silver currency as a whole. The volume almost invariably increases at the close of each year, and as regularly decreases at the beginning of the year. Apart from these periodic changes, there is a general slow increase until 1886, and thereafter the amount outstanding remains practically stationary. There seems to be room for about sixty millions of the dollars, and for no more.

The government has made every effort to get the dollar coins out of its hands. Congress has annually appropriated a sum to enable the Treasury Department to ship them, free of expense, to all applicants in any part of the United States. The premium so offered to persons who have occasion to use money in small denominations, and especially to employers having large pay-rolls, has sometimes led to considerable call for them. But the great bulk of the coins

thus got out of the Treasury return to it almost at once. The employees to whom they are paid, get rid of them as fast as they make purchases; the shopkeepers, in whose tills they accumulate, finding their customers averse to taking them in change, turn them into the banks on deposit; and the banks finally turn them into the nearest sub-Treasury in payment of public dues. The round-trip from Treasury back to Treasury is easily made, in some districts, in the course of a single week.[1] The degree of favor which they meet with of course affects this movement, and varies in different parts of the country, apparently reflecting in a curious way the popular feeling as to the desirability of having silver currency at all. They circulate very little east of the Alleghanies, but are used more freely and permanently in the Mississippi valley. Among the negroes of the South the big pieces are said to be favorites, and to find a permanent lodgment. Their greatest circulation, as we have seen, was reached in 1886; after that time the change in the denominations of silver certificates, to be discussed later, caused a decline in the amount used.

We may now return to the movements of the silver currency as a whole, indicated by the irregular unbroken line of the chart. Between that line and the dotted regular line above it, indicating the maximum issue authorized, there is a gap representing

[1] The practice of paying express charges on shipments of silver dollars has ceased to be of importance since 1886, when the issue of silver certificates in small denominations was authorized. Since that date, as will presently be explained, there has been little difficulty in getting the silver currency into circulation, and no occasion at all for stimulating the circulation of dollars rather than of certificates.

what we may call the dead silver. The gap stands for the dollars coined (or, after 1890, for the ounces of silver purchased), which lie in the Treasury, but are not injected in any form into the circulating medium. As a glance at the chart shows, it is very variable. It was greatest in 1885 and 1886, the maximum being reached in July of the latter year, when the dead silver was no less than ninety-four million of dollars. It was least in 1881, and again in the last few months of 1889. The variations show the greater or less success with which the silver currency made its way into the working money of the country. By them we may divide its history into four periods. The first runs from 1878 to 1884, a period on the whole of ready circulation. Then comes a break, in 1885 and 1886, when the silver currency contracted, and the dead silver accumulated in the Treasury,—much the most interesting and instructive of the three stages. The third period begins in 1886, when the volume in circulation expands, and gains rapidly on the total coinage, causing a steady decline in the amount of dead silver. Finally, with the act of July, 1890, the whole silver question enters on a new phase, which can best be discussed by itself. These four periods I shall take up in succession.

III.—1878–1884.

The first silver dollars were coined in March, 1878, and in the course of that month 190,000 of them went into circulation, while 810,000 remained in the Treasury. Something like this proportion was maintained through 1878 and the first half of 1879: not

more than one-fifth of the coins made their way into the hands of the public. Silver certificates practically did not make their way into circulation at all.

The history of the certificates at this time is curious and significant. When the first purchases of bullion were made, in the course of 1878, checks in payment were drawn by the Director of the Mint, payable in silver dollars. The purchases were made chiefly at San Francisco. There the payees drew, instead of silver dollars, silver certificates of large denominations. These were sent at once to New York; and within ten days from the day of issue they found their way into the Treasury through the New York custom-house. Had the revenues collected by the government in San Francisco been larger, they would probably have been turned in at that port within forty-eight hours.[1] The rapidity with which they came back at first nonplussed the officers of the Treasury. It was some time before they learned how impossible it was to get the certificates of large denominations into circulation: a result, however, which followed inevitably from the unwillingness of the banks, who alone can conveniently use the large certificates, to hold them or use them. It was certain from the start that the only form in which the silver currency could get into permanent circulation was in the denominations which serve for every day retail transactions. In the first year no special effort seems to have been made by the Treasury to get out the certificates of the smaller denominations permitted by law. Conse-

[1] See the Report of the Treasurer in the *Finance Report* for 1879, p. 350. Up to June, 1879, there had been issued $7,843,000 of certificates of denominations of $1,000, of which $6,683,000 had been redeemed.

quently the dead silver accumulated rapidly. At the end of June, 1879, out of a total coinage of thirty-six millions, the Treasury held in its vaults, unrepresented by certificates in circulation, no less than twenty-eight millions. These twenty-eight millions represented so much revenue paid out by the government for the purchase of silver which was simply stored away in its vaults. As the revenue then greatly exceeded the expenditure, the process caused no financial embarrassment; but clearly it was one which could not go on indefinitely.

This phase, however, did not last long, nor was it characteristic of the general movement during the first of the three periods. About the middle of 1879 a slight upward movement began, both in the circulation of dollars and of certificates. Towards the end of 1880, as the chart indicates, this movement attained large dimensions. The amount of silver certificates in circulation increased with a bound, rising from less than eight millions in August to more than thirty-six millions in December, and leaving only a narrow margin of dead silver in the Treasury. In the first half of 1881 there was a check to the increase; but in the second half of that year the upward movement was resumed. By the end of December, 1881, the silver certificates in the hands of the public amounted to over sixty-two millions, and the circulation of dollars and certificates combined was within seven millions of the total amount coined.

Some explanation of this sudden and extraordinary change is to be found in a new measure adopted by the Treasury Department for the purpose of pushing the silver into circulation. In September, 1880, the

Treasury issued a circular by which, in exchange for deposits of gold coin with the assistant treasurer in New York, drafts were offered on the sub-treasuries in the South and West, payable in silver certificates. In other words, the Treasury undertook to save the expense of the transportation of cash to all persons who had occasion to remit to the South and West. The bait took: large amounts of certificates were paid out, in exchange for deposits in New York, by sub-treasuries at New Orleans, St. Louis, Chicago, and Cincinnati.[1] The payments, as we might expect, were almost entirely in certificates of the two smallest denominations then allowed by law,—for ten and twenty dollars.[2]

[1] See the *Report of the Treasurer* for 1881, in the *Report on the Finances*, p. 430. Between October 15, 1882, and March 2, 1883, this practice was suspended, and it was finally discontinued in Jannary, 1885. By far the largest part of the silver certificates issued under it were paid out by the sub-treasuries of St. Louis and New Orleans,—a clear indication of the region from which the demand for money came.

[2] The denominations of the silver certificates outstanding at the close of the fiscal year 1882 are given below. I have added figures for 1886, by way of illustrating the form in which the silver currency went into circulation at the period here under consideration.

Silver Certificates.	1882	1886
One dollar	....	....
Two dollars	....	....
Five dollars	....	....
Ten dollars	29.2	50.3
Twenty dollars	25.0	45.0
Fifty dollars	3.3	7.4
One hundred dollars	4.0	9.6
Five hundred dollars	1.7	1.8
One thousand dollars	2.9	1.9

It must be remembered that "outstanding" here means issued by the Treasury, and includes certificates held by the Treasury against itself; and the chances are that, even of the small amounts of large certificates, a good part was held by the Treasury in its cash. Compare the footnote to p. 45, below.

It is obvious that a device such as the Treasury resorted to in 1880 would have had no effect on the movement of the silver currency out of the public vaults, if the demand for cash to be shipped westward had not caused exchange in New York on the West to be at a premium. The conditions of the time led to such a demand, and it was inevitable that there should be in some form or other a westward movement of cash. Had there been no silver currency, there would certainly have been an inflow of gold from abroad even greater than in fact took place. It is not necessary to do more than recall to the reader's mind the salient events of these unusual years, which concurred so luckily to assure the success of the resumption of specie payments, and to make possible the absorption of the silver currency. The crops of 1878 to 1882 were abundant, even after making allowance for the comparatively lean year 1881; the crops in Europe were meagre; our exports suddenly swelled, and attained in 1881 a volume which has not again been reached up to the present time (1891). Large quantities of gold flowed in during the fiscal years 1880 and 1881. The long period of depression which began with the crisis of 1873 was likely to have been followed in any case by a renewal of activity; the sudden turn in foreign trade contributed not a little to stimulate the general revival. In all directions new operations were begun, and old ones pushed on a larger scale. The building of railroads and the production of iron, both supposed to be barometers of trade, advanced with extraordinary steps. Most significant of all, bank loans and deposits swelled rapidly; the reserve of

lawful money after 1880 remained nearly stationary;[1] the national bank circulation rose, and reached its highest point in the latter part of 1882.

All this activity meant a greater use of money in paying wages, in the retail transactions of every-day life, in "moving the crops." The rapid growth of population, especially in the West and South, would have in any case brought about a greater demand for what we may call large change. The conditions under which national bank notes could be issued were already becoming so unpromising that no considerable increase in their quantity could take place; and the silver currency consequently found a ready and permanent circulation. The Treasurer of the United States, in his report for 1881, thought himself justified in saying that their issue "averted what might have proved to be a serious public incon-

[1] For convenient reference, some significant figures as to bank operations are here given for the whole period from 1878 to 1889. The figures (except for the last column) indicate millions:

	Total deposits in all national banks.	Total specie and lawful money held.	Reserve held by banks of New York.	Proportion of reserve to deposits in New York.
Oct. 1, 1878..........	679	127.7	50.9	26.8%
1879..........	769	138.1	53.1	25.3
1880..........	968	172.5	70.6	26.4
1881..........	1,112	172.6	62.5	23.3
1882..........	1,119	174.8	64.4	25.4
1883..........	1,168	188.4	70.8	26.5
1884..........	1,099	219.8	90.8	35.6
1885..........	1,248	263.5	115.7	37.0
1886..........	1,301	225.1	77.0	27.2
1887..........	1,388	245.0	80.1	28.2
1888..........	1,543	268.2	96.4	28.2
1889..........	1,655	263.0	84.9	25.1

The reader will note the rise in deposits, and the stationary reserve, in 1880–84. The slackening of the growth of deposits in 1884–85 and the marked accumulation of cash at that time will be considered later, when we come to the second phase of the silver situation.

venience." No doubt the absence of any increase in the currency would have been an inconvenience. But if there had been no silver, other sorts of money would not have failed to supply the need. As it was, the issue of bank notes increased under the influence of the same causes that led to the greater use of silver; a large importation of gold took place. In one or both of these forms, the money supply would have adapted itself to the demand. In the absence of silver, an even greater importation of gold would have taken place, and the every-day circulating medium would have been made up in larger proportion of that metal.

These general conditions were little changed through the years 1882 and 1883. There was no such decided swing in business operations as there had been in the two years preceding; but some advance continued. The volume of bank loans and deposits, as shown by the Comptroller's reports on the national banks, steadily increased, though at a slackening rate, until the close of 1883. While the conditions thus continued favorable for an increase in the amount of money in active circulation, the decline in the circulation of national bank notes, which began after the maximum had been reached in the early part of 1882, contributed still more to make way for a growth in the volume of silver used by the community. Accordingly, while there was some check in 1882 to the upward movement of outstanding silver, that movement was resumed in 1883; and on the whole, for the three years 1881, 1882, and 1883, the silver currency was absorbed by the public as fast as the dollars were coined at the mint.

IV.—1885-1886.

But the signs of a general reaction, such as all experience would lead us to regard as inevitable, showed themselves with the beginning of 1884. The extraordinary failures of the Marine National Bank and of the firm of Grant & Ward took place in May, 1884, and were followed by other bank suspensions, by the failures of various private bankers and brokers, and the break-down of large railway enterprises, notably of the West Shore Railroad. While there was no acute crisis like that of 1873, all the signs of a period of depression showed themselves. The building of railroads almost ceased; the production of iron fell off; bank loans and deposits declined. With this general break-down, the circulation of the silver currency entered on its second phase.

As the chart indicates, the beginning of 1884 showed some decline in the amount of silver dollars and certificates held by the public. This was followed in the autumn months by the usual increase; but in the early part of 1885 there was a sharp decline. No appreciable growth took place in the autumn months of 1885, at the time when a growth was most likely to take place; and the little that was gained was lost again in the first half of 1886. On the whole, the silver currency in the hands of the public remained stationary from the beginning of 1884 till the middle of 1886. Under these conditions the regular coinage of silver dollars necessarily caused dead silver to accumulate in the Treasury; and in July of 1886 the dead silver reached its maximum, nearly ninety-four millions of dollars.

The explanation of the stationary volume of the silver currency is not difficult to find. With the general standstill or decline in business activity, the occasions for the use of money for transfer from hand to hand ceased to grow, even became less. The bank deposits, and the clearings of the banks in the cities, shrank appreciably, indicating a decline in wholesale transactions. The currency of retail and consumer's transactions, in which the silver had hitherto found room for expansion, showed a similar tendency. As is usual in periods of depression, the unused money of the public accumulated in the vaults of the banks, and what is called a plethora of money continued through the year 1885.

The general conditions which caused cash to accumulate in the reserves of the banks, caused the silver certificates to accumulate in the vaults of the government. The silver certificates in general now went through the same course which we have seen in the circulation of the silver dollars and of the certificates of large denominations. The people had less occasion for using money than before; they certainly had no occasion to use the additional silver currency which the regular monthly coinage was creating; the banks would not let the silver accumulate on their hands; consequently it found its way back into the government vaults. The figures as to the customs receipts of the government at New York show exactly when and how this back-flow

took place.[1] During 1882 and 1883 gold and gold certificates had formed between 70 and 80 per cent. of the customs receipts at New York,—the largest single point of collection for the public revenue. Beginning with 1884, the proportion sank, and for the fiscal year 1884–85 it was less than 35 per cent. Silver, in the form of dollars and certificates, accumulated in the Treasury, while from the beginning of 1885 till the middle of 1886 the silver currency in the hands of the public declined.

The situation of the Treasury under these circumstances was, if not dangerous, at least suggestive of the danger of a breakdown in the policy which the government has succeeded in pursuing ever since the resumption of specie payments,—that of paying gold to every creditor who chooses to demand it. The amount of gold in the government's revenue was shrinking; and moreover, with the depression in trade, customs receipts diminished, and the total revenue was also falling off. On the other hand, the ordinary gold liabilities and payments showed little decline, if any. The chief point of disbursement of the government is through the sub-Treasury in New York, which is a member of the New York clearing-

[1]The receipts from customs at New York were made up as follows:

	Gold coin and certificates.	Silver coin and certificates.	United States notes.
First six months of 1883..........	75.8%	17.8%	6.4%
Second " " " 1883..........	77.5	16.8	5.7
First " " " 1884..........	59.8	27.9	12.3
Second " " " 1884..........	34.7	34.9	30.4
First " " " 1885..........	36.0	36.6	27.4
Second " " " 1885..........	55.3	14.6	30.1
First " " " 1886..........	28.2	12.5	59.3
Second " " " 1886..........	47.3	11.6	41.1

house, and has regularly larger amounts to pay than to receive. The banks, who are its creditors at the clearing-house, prefer gold. The result, from the beginning of 1884, when silver began to crowd gold out of the public receipts, was a heavy drain on the government's reserve of gold. If the reader will turn to the chart, and observe the line representing the government's gold holdings, he will see that the amount fell from over one hundred and fifty millions in the beginning of 1884 to less than one hundred and sixteen millions at the close of May, 1885. At the latter date the reserve was the smallest held at any time since the resumption of specie payments.

The policy of the Treasury during this period was simple, though not always easy to maintain. After the death of Secretary Folger in September, 1884, Mr. Gresham was put in charge of the Treasury, but was succeeded in a month by Mr. McCulloch, who remained in office till March of the following year, when the new administration brought Mr. Manning into the office. Both Mr. McCulloch and Mr. Manning refrained from pushing silver certificates into circulation where they were not wanted; paid out silver currency whenever it was likely to stay out; ceased to pay out funds for the redemption of bonds; and endeavored to strengthen the reserve of gold. As to the silver certificates, the policy of the Treasury is shown by the events in Boston during the early part of the summer of 1885. At the sub-Treasury at Boston, silver certificates had been paid out less sparingly than at New York. Silver currency consequently became so plentiful that hardly any other form of money was to be had. A turn in the balance of payments between New York and

Boston brought occasion for remitting cash to New York. For such remittances, the tacit understanding of the banks made silver unavailable. Consequently exchange on New York came into demand, and went up to a premium of a dollar a thousand. The express charge for carrying cash to New York is only fifty cents a thousand; but cash available for New York payments, — namely, gold or greenbacks, — was scarce; hence the unusual premium on New York exchange. The Boston banks thereupon appealed to the Secretary of the Treasury to cease paying out silver certificates at the Boston sub-Treasury. Their request was granted; and a repetition of this sort of embarrassment was thereby prevented.[1]

On the other hand, the Treasury made an effort to check the return of silver currency into its vaults by getting more silver dollars into permanent circulation. At this time the currency of the denomination of one and two dollars consisted almost exclusively of United States notes, or greenbacks.[2] In June, 1885, the issue of greenbacks in denominations of less than five dollars was stopped, in the hope of bringing about a greater use of the coined dollar. The effects of this measure could only be gradual. The one dollar and two dollar notes already in circulation could return to the Treasury only as, becoming dirty and unfit for use, they were sent in to be ex-

[1] It was at this time that the Boston banks adopted definitely the New York practice of not using silver certificates in payment of clearing-house balances. See the note to p. 16, above. The revenue payments to the sub-treasury at Boston were comparatively small, and the Boston banks accordingly had not so ready a means of getting rid of their silver certificates as those of New York.

[2] Bank notes of less than five dollars had not been issued since 1879, the resumption act having prohibited their issue after that date.

changed for clean notes. The old notes could then be destroyed, and new notes of larger denominations furnished in their place. As it turned out, the public had a strong preference for notes rather than coin, and when it appeared that new notes of small denominations were no longer to be supplied, the old ones were kept in use long after they had become unfit for circulation. Dirty notes were preferred to bulky dollars. Consequently, the success of this measure was not great. Nevertheless, something was secured; for in the second half of 1885, when the general conditions were unfavorable to an increase in the outstanding circulation, and when the silver certificates in the hands of the public in fact showed a decline, the amount of silver dollars outstanding showed an increase of ten millions. The gain was made chiefly in the South, and, so far as it went, helped in preventing the Treasury from being overwhelmed by the accumulation of silver.

Much more important as a means of tiding over the period of depression was the cessation of the payment of the public debt. In 1885 there were still outstanding about two hundred millions of 3 per cent. bonds, issued in 1882 in place of older bonds bearing a higher rate of interest, and redeemable at par at the pleasure ot the government. The process of calling them in, and reducing the public debt by their payment, had begun immediately after their issue, and had gone on steadily until late in 1884. Then it ceased, although the government revenue still continued to exceed its expenses. From September, 1884, until December, 1885, a period of more than a year, no bonds were called, and the interest-

bearing public debt remained stationary.[1] In other words, the surplus revenue of the government, instead of finding its usual vent in the redemption of bonds, was devoted to increasing the dead silver in the Treasury vault. Every month two millions were spent in buying silver bullion and coining it into dollars, which were stowed away in the Treasury vaults out of harm's way. In addition, large quantities of silver certificates were received in payment of public dues, and then allowed to lie idle in the Treasury. In August, 1885, there were nearly forty-three millions of silver certificates in the Treasury, the largest holding since the passage of the act of 1878. The result of this cautious policy was to retire the redundant silver certificates: as this was accomplished, less of them were turned in to the Treasury in payment of public dues; more gold flowed in, and the government's gold reserve rose.

It is obvious that the Treasury could pursue with success the course just described only because its income exceeded its expenditure. In the eighteen months between the beginning of 1885 and the middle of 1886, the government received over twenty-six millions in silver certificates which it did not reissue; paid out, in addition, some thirty-six millions for silver bullion, which was coined into silver dollars, and in that form stowed away in the

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[1]This does not appear in the annual reports of the Secretary of the Treasury, which run for the fiscal year ending June 30. Bonds were called in the first half of the fiscal year 1884-85, and in the second half of 1885-86, so that the report for each year states a decline in the bonded debt. But the 131st call for bonds matured on November 1, 1884; the 132d, on February 1, 1886. Between those dates the 3 per cents. outstanding remained stationary, at 194.2 millions.

Treasury vaults; and materially increased its net holdings of gold. These enormous sums of course represent an excess of income over outgo. Notwithstanding the decline in its receipts as compared with earlier years, the government still had a surplus so large as to enable it to hoard sixty millions of silver currency, and to add twenty-five millions to its holdings of gold, before it resumed, in the beginning of 1886, the repayment of the public debt. In the financial history of any other country such a surplus would be considered a rare piece of good luck. We have had it for so many years that we do not fairly realize what risks it enables us to run without coming to grief.

Further aid in 1885 came from the willingness of the New York banks to support the Treasury. In July of 1885, when the gold reserve was at its lowest, the banks of New York, through the clearing-house, turned over to the Treasury $5,915,000 of gold, in exchange for fractional silver.[1] The transaction was called an "exchange": it was to all intents and purposes a loan. The banks moreover expressed their willingness to lend more, if more should be needed. The avowed object was to enable the Treasury to maintain gold payments until the meeting of Congress in December, when legislation for stopping the silver issues seems to have been expected.

[1]The correspondence relating to this transaction is printed in the report made by Secretary Manning in March, 1886, in answer to an inquiry from the House of Representatives. *House Executive Documents*, 49*th Congress*, 1*st session* (1885–86), *vol.* 30, *No.* 100. At the end of October, 1885, when the Treasury gold had risen to $142,000,000, the banks asked for a return of part of their gold, and were told bv Acting-Secretary Fairchild they could have the whole of it.

It is an open question whether at that juncture the situation was such as to make necessary this call on the banks for aid. There was certainly a strong feeling of doubt as to the Treasury's ability to maintain its policy of paying gold to any creditor who wanted it. That feeling showed itself in the pages of leading financial journals, like the *Financial Chronicle,* which steadily represented the situation to be full of danger; and it was reflected in the concluding chapter of Professor Laughlin's *History of Bimetallism,* published in the course of 1885. It was shown in a more practical form by the striking increase in the holdings of gold by the banks, and by their disposition to turn into the Treasury not only silver, but greenbacks as well. The gold held by the banks of New York, for example, rose from about seventy-two millions in the early part of 1884 to one hundred and thirteen millions in the middle of 1885.[1] On the other hand, the greenbacks, which, like

[1]The reports of the Comptroller of the Currency state the holdings of specie (which is practically all gold) and of legal tenders by all the national banks, at the dates stated below; to which I have added, from the weekly statements in the *Financial Chronicle,* the holdings by the New York banks at the same dates:

	All national banks.		Banks of New York.	
	Specie.	Legal tenders.	Specie.	Legal tenders.
1884 March 7	122.1	75.8	71.9	29.7
April 24	114.7	77.7	58.2	28.1
June 20	109.7	76.9	51.3	28.8
Sept. 30	128.6	77.0	73.8	30.4
Dec. 20	139.7	76.4	86.8	37.7
1885 March 10	167.1	71.0	103.8	32.0
May 6	177.4	77.3	113.0	32.7
July 1	177.6	79.7	113.9	43.6
Oct. 1	174.9	69.7	107.1	30.7
Dec. 24	165.4	67.6	91.0	27.2
1886 March 1	171.6	67.0	89.7	31.7
June 3	157.5	79.6	66.5	40.0
Aug. 27	149.0	64.0	68.6	25.7

other forms of money, flowed into their tills in the course of the depression, were turned over to the government in payment of public dues. As the figures given a few moments ago show, the government was getting thirty, forty, fifty per cent. of its customs receipts at New York in the form of greenbacks.[1] Such an inflow of greenbacks was an unmistakable sign that general confidence in the ability of the Treasury to maintain gold payments was shaken. Gold in hand was preferred to the greenback, the government's promise to pay gold.

A word may be said here as to the position of the United States notes, or greenbacks. The amount of these obligations outstanding was fixed by the act of May, 1878, at the point where they then stood,—$346,681,016. The resumption of specie payments in 1879 made them redeemable in coin; "coin" being then undoubtedly supposed to mean gold. The Treasury has ever since held itself willing to redeem in gold any notes presented; but Congress has never made any specific provision as to the amount of gold to be reserved for that purpose. The Resumption Act itself, passed in 1875, simply directed the Secretary of the Treasury to redeem the notes after January 1, 1879, and authorized him to accumulate gold for that purpose by selling bonds; but how much gold he was to accumulate or to keep on hand, was left to his discretion. The only approach to the statement of a specific reserve is to be found in an act of 1882, in which a section authorizing the issue of gold certificates is qualified by the proviso "that the Secretary of the Treasury shall suspend the issue of such gold certificates whenever

[1] See the note to p. 30, above.

the amount of gold coin and bullion in the Treasury reserved for the redemption of United States notes falls below one hundred millions of dollars."[1]

This proviso has been construed by some Secretaries of the Treasury with greater strictness, by others with less; but all Treasury statements since its enactment have set aside, in some form, one hundred millions of gold as a separate fund among the assets. On the face of it, the only legal duty imposed on the Secretary of the Treasury seems to be that of suspending the issue of gold certificates when the gold in the Treasury is less than one hundred millions. It can hardly be maintained that, when his gold reaches the hundred million line, he must refuse to pay it out for any purpose except the redemption of United States notes. But practically it is immaterial what precise legal interpretation is given to the section in regard to the gold reserve. Even in 1882, the greenbacks did not stand alone, as they doubtless were supposed to do; since for all practical purposes, the silver certificates constituted an obligation bearing on the gold reserve as much as did the greenbacks. Certainly at present, when the act of 1890, as we shall presently see, has added a new and large mass of notes constituting a direct liability against the government's gold, it is quite out of the question for the Treasury to adopt any policy which treats the greenbacks as a distinct and

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[1]The act was one for extending the corporate existence of national banks: the section here referred to had nothing to do with its main provisions. See Dunbar's *Laws Relating to Currency, Finance, and Banking*, p. 223.

As to the history and meaning of the proviso as to the hundred millions, see Horace White, "The Silver Situation," in the *Quarterly Journal of Economics*, July, 1890, vol. IV, p. 397.

peculiar claim on its holdings. The currency which the government now issues includes not only the greenbacks, but also the silver certificates, the silver dollars, and since 1890 the new Treasury notes. All of these it tries to keep equal with gold: the greenbacks and the new notes by the direct offer of immediate redemption in gold; the silver dollars and silver certificates by its willingness to accept them in all payments to itself, coupled with the offer to make all payments to its creditors in gold. The money which rests on the government gold reserve therefore now includes much more than the greenbacks. If one hundred millions was thought no inadequate reserve for the greenbacks alone, certainly no less sum will suffice for the larger mass. Hence any approach to a hundred millions in the Treasury holdings of gold must be a source of anxiety to a conservative Secretary; and the tradition of a required reserve for the greenbacks, whether or no it has a clear legal basis, makes that limit important in the eyes of the public as well as of the government officers.

The low level reached by the gold reserve in the middle of 1885 was, therefore, a natural source of the uneasiness which, as we have seen, the Treasury and the public then showed. On the other hand, there were elements of strength in the situation in 1885. By far the most important of them was the surplus of revenue over expenditure, which, as we have seen, was used as a means of preventing the silver currency from being put in circulation in excessive quantities. Some revival of business activity set in during the second half of 1885, helping the Treasury in both directions. It caused an

increase in the receipts from customs duties and other sources; it also caused an increased use of silver currency in the reviving business of the people. The decline in the volume of the silver currency outstanding came to an end in the autumn of 1885, while the gold reserve showed a considerable upward movement. The period of real anxiety lasted only a few months, in the spring and summer of 1885. By the end of that year the situation could no longer cause anxiety.

V.—1886-1890.

The third of the periods into which we have divided the historical account begins with the year 1886. If the reader will turn once again to the chart, he will observe, in the middle of 1886, a sharp upward movement in the line showing the volume of silver in use with the public. The turn marks the beginning of a new stage. The situation at this period was modified by two factors of importance: first, the sharp decline in the national bank circulation, and, second, the issue of silver certificates of very small denominations.

The decline in the national bank note circulation presents a set of questions different from those discussed in the present paper. A very brief statement of its causes and extent will suffice to make clear its bearing on the present subject. The steady improvement in the credit of the United States, causing its bonds to yield a lower and lower rate of interest, tended to cut down more and more the profit on the issue of national bank notes, until by 1883 that profit had practically disappeared. After the revival of

activity in 1880, the amount of bank notes in circulation increased, with little interruption, until the close of 1882, when it reached its maximum. Then a decline set in, which has continued without interruption to the present time, and is likely to continue, though at a slackened rate, for several years to come, until the minimum permitted by law is reached. The immediate cause was the steady redemption by the government of the 3 per cent. bonds of 1882, of which the banks held largely. Other bonds in the market,—the 4 and 4½ per cents., and the Pacific railway 6s,—were at too high a premium to make it profitable to buy them as a basis for circulation. During the years 1884 and 1885, when, as we have seen, the process of debt payment ceased for a while, the decline of the bank circulation naturally slackened; but when the improvement in the government financial condition made it possible to resume the redemption of bonds, the decline again set in sharply, and caused a rapid contraction of the bank notes.

A word may be said as to the exact mode in which the contraction of the note issue has been brought about. The provisions of the national banking acts permit a bank which wishes to retire its circulation, to deposit in the Treasury lawful money to the amount of its notes outstanding, and thereupon to receive the bonds held as security for the notes. The liability of the bank for the notes thereupon ceases, the government assuming the obligation to pay them. The notes, however, may remain in general circulation for some time after the bank has done with them, and, in fact, are likely to come in for redemption only so fast as dirt and wear

render them unfit for use. The Treasury, meanwhile, does not hold the lawful money left in its hands by the banks as a special deposit, but treats it as part of its general quick assets.[1] The effects of this process have been, on the one hand that the government's nominal holdings of cash have been considerably swelled, and on the other hand that the bank notes outstanding have diminished less fast than the banks have given up their circulation. There has been steadily outstanding, during the last ten years, a considerable amount of bank notes which we may called doomed,—notes which the banks have given up, but which have not yet come into the Treasury for payment and destruction. In the foot-note are given the figures for recent years as to the gross circulation of notes,—namely, those actually in use by the public,—and as to the net circulation, ascertained by subtracting from the gross amount the doomed notes.[2]

[1]Indeed, the silver act of 1890 specifically prescribed that "the balances standing with the Treasurer of the United States to the respective credits of national banks for deposits made to redeem the circulating notes of such banks, and all such deposits received hereafter for like purpose, shall be covered into the Treasury as a miscellaneous receipt, and the Treasury of the United States shall redeem from the general cash in the Treasury the circulating notes of said banks which may come into his possession subject to redemption."

[2]National bank notes outstanding (in millions of dollars):

	Gross (total outstanding).	Net (less lawful money deposited).
Oct. 31, 1882	362.7	324.3
" 1883	352.0	316.0
" 1884	333.6	291.8
" 1885	315.8	276.3
" 1886	301.5	219.7
" 1887	272.0	169.2
" 1888	239.4	152.4
" 1889	202.0	130.2
" 1890	179.8	125.0

It should be noted that not all the lawful money deposited for the payment of notes in process of retirement comes from banks

Looking at the gross circulation, which represents the notes passing from hand to hand in the community, we find a diminution of one hundred and twenty millions between 1886 and 1890. Our bank notes have always been made up of the smaller denominations. Since the resumption of specie payments, when the banks were no longer allowed to issue new notes of less than five dollars, they have been mainly in denominations of five, ten, and twenty dollars. As these notes disappeared, a void was made in the every-day money of the public, and a place so made for the silver certificates. The decline in the bank notes has been great and rapid since 1886, and the silver certificates consequently have been easily absorbed into the circulating medium.

The other important factor in the situation after 1886 was the legislation of that year in regard to the denominations in which silver certificates could be issued. The act of 1878, it will be recalled, had permitted the issue of certificates only in denominations of less than ten dollars. The circulation had been almost exclusively in denominations of ten and twenty dollars; and the limitation to these denominations was of great and probably unexpected effect in preventing the silver currency from finding its way into the only place where it was likely to stay,—in the every-day money of the people. In the general appropriation act of 1886, a rider was inserted in the appropriation for the Bureau of Engraving, authorizing the printing of certificates of one, two, and five dollars.[1] We have already

which are reducing their circulation; a small part of the total deposit being from banks which have failed, or are in process of voluntary liquidation.

[1] *Statutes at Large*, vol. XXIV, p. 227; June 30, 1886.

seen that the Secretary of the Treasury made an endeavor,—even before this change was authorized,—to promote the circulation of the silver dollars, first by cutting down the number of legal-tender notes of small denominations, finally by ceasing to print them altogether. Under these circumstances, the small silver certificates, of which the issue began immediately after Congress authorized them, were rapidly, almost eagerly, absorbed by the public. In the autumn months of 1886, the certificates for one, two, and five dollars, were issued as fast as they could be printed.

As it happened, the revival of business activity became more pronounced at this same time, and there was room for a general expansion of the retail currency of the community. Since 1886, the volume of silver currency has gained almost steadily on the total coinage of the dollars; and with the beginning of 1889, practically all of the dollars coined were in circulation, chiefly, of course, in the form of certificates. The increase, it need hardly be said, has been mainly in the certificates for one, two, and five dollars. These small certificates have taken the place of small United States notes; while the decline of the bank note circulation has made way for the additional amount of larger United States notes issued in place of the small ones retired. Withal, there has been a steady growth in the aggregate amount of the money of these denominations used,—the natural result of the steady growth of the community in population and wealth.

We may summarize the results of the changes described in the preceding pages in three tables, giving the amount of large change, or money in

denominations of twenty dollars and less, outstanding at three important dates,—at the close of the fiscal year (June 30) in 1878, 1886, and 1890:[1]

[Figures indicate millions of dollars.]

1878	$1	$2	$5	$10	$20	Total
U. S. notes	20.9	20.9	54.7	65.5	62.7	224.7
Bank notes	4.0	2.8	93.9	104.1	68.6	273.4
Silver certificates	......	......	......	.1	......	.1
Silver dollars	.9	....	......	......	......	.9
Total	25.8	23.7	148.6	169.7	131.3	499.1

1886	$1	$2	$5	$10	$20	Total
U. S. notes	17.6	18.2	85.6	66.6	55.1	243.1
Bank notes	.4	.2	83.3	101.5	73.0	258.4
Silver certificates	......	......	......	50.3	44.9	95.2
Silver dollars	54.1	......	......	......	......	54.1
Total	72.1	18.4	168.9	218.4	173.0	650.8

1890	$1	$2	$5	$10	$20	Total
U. S. notes	3.3	2.9	57.7	90.4	111.5	265.8
Bank notes	.4	.2	52.0	59.5	45.5	157.6
Silver certificates	31.1	22.5	102.1	111.5	26.3	293.5
Silver dollars	56.1	......	......	......	......	56.1
Total	90.9	25.6	211.8	261.4	183.3	773.0

[1]The figures are compiled from the *Report of the Treasurer,* 1890, appendix, table No. 28. It should be noted that silver certificates "outstanding" here include certificates which have been paid into the Treasury, and are held by the Treasury against itself; to this extent the figures do not indicate certificates held by the community. In recent years, the Treasury cash has included very few of

It will be seen that the one dollar and two dollar notes, which in 1878 were greenbacks and bank notes, were in 1890 almost entirely silver certificates. There is a very striking increase, between 1878 and 1890, in the total number of one dollar pieces outstanding; but this increase, so far as actual circulation goes, is in some part more apparent than real. A large part of the silver dollars which are out of the Treasury are not in use as money. Some are doubtless hoarded: it is said that the negroes in the South have hoarded considerable numbers. Some have been melted by jewellers and others for use in the arts.[1] Though permanently out of the Treasury, the fifty or sixty millions of silver dollars are probably not all in actual monetary use.

In the larger denominations, the proportion of silver certificates grows steadily less. They form

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the smaller certificates, and indeed not many certificates of any kind. On the other hand, the Treasury held in June, 1886, nearly twenty-eight millions of certificates, in which are doubtless included a considerable number of the ten and twenty dollar pieces counted in the text as in circulation. The real increase in the large change of the community has therefore been greater than the figures indicate.

The bank notes of $1 and $2 reported as outstanding in 1886 and 1890, are chiefly notes which, having been lost or destroyed, have not been presented for redemption. They are therefore only nominally "outstanding."

[1]It may seem strange that jewellers should melt silver dollars, when they can buy with them, as money, 20 or 25 per cent. more silver bullion than the dollars contain. No doubt large manufacturers are careful not to incur such a loss. But a jeweller using silver on a small scale, and producing an article whose value rests little on the bullion used, and chiefly on the labor put into fashioning it, may procure his silver by the handy process of melting down a dollar or two. I am assured by Mr. Leech, the Director of the Mint, than whom there could be no better informant, that this takes place to no inconsiderable extent.

about one-half of the five dollar pieces, two-fifths of the ten dollars, and but little more than one-sixth of the twenty dollars. If we were to carry the figures to the higherd enominations, we should find the silver currency in less and less proportions. They form about eight per cent. of the fifty dollar notes "outstanding," and less than this proportion of the one hundred dollar notes. In the denominations above one hundred dollars, their use is insignificant, or ceases entirely.[1]

The whole amount of money in these denominations was, in 1890, seven hundred and seventy-three millions of dollars. In 1878 it was very nearly five hundred millions. The increase in twelve years, therefore, was two hundred and seventy-three millions. That increase has come chiefly from the addition of the silver dollars and certificates to the circulating medium. There has been also some increase in the use of greenbacks of denominations of twenty dollars and less, notwithstanding the great shrinkage of the one and two dollar notes.

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[1]The total of silver certificates outstanding was, in June, 1890,

In $1 notes,		31.1 millions.
2	"	22.6
5	"	102.1
10	"	111.5
20	"	26.3
50	"	3.3
100	"	4.3
500	"	.25
1,000	"	.17
5,000	"	none
10,000	"	none
Total,		301.5

Here, again, it must be remembered that "outstanding" includes some certificates held by the Treasury against itself, and so not actually in circulation. At this date, the Treasury held 4.3 millions in its cash, which probably included a considerable proportion of the large certificates reported as "outstanding."

In 1878, the greenbacks of larger denominations were more used than they are now, being held by banks for reserve and for use in clearing-house payments. Gold has taken their place, in large part for these purposes; which accounts for the increased circulation of greenbacks of the denominations of five, ten, and twenty dollars. The gain in silver and in greenbacks has much more than offset the decline in the bank notes.

Since 1878, then, the total gain in these denominations was two hundred and seventy-three millions, or at the rate of between twenty-five and thirty millions a year. Between 1886 and 1890 the gain was at the rate of fully thirty millions a year. That sum probably represents the amount of money for every-day use which is called for each year by the regular increase of population and wealth. A figure not varying much from this is reached if we calculate the annual increment in another way. The total amount in 1890 was seven hundred and seventy-three millions. To this should be added the gold in general use, while a deduction should be made for the silver dollars which are outstanding, but not in use as money. As to the gold in the country, there are some perplexing questions, to which allusion will be made at a later stage of this discussion. But it is certain that, except on the Pacific coast, gold appears but rarely in everyday use. Ample allowance will certainly be made for the gold which is in every-day circulation, if we put it at one hundred millions or thereabouts. In other words, we shall probably err on the side of excess if, to allow for the gold in use, we raise the sum of seven hundred and seventy-three millions, as just reckoned, to the round

sum of nine hundred millions, and name the latter amount as the total volume of money used in denominations of twenty dollars or less. This would mean for a population of sixty-two millions about fifteen dollars a head. The occasion for the use of money of this kind increases with the growth of population; not indeed in any exact correspondence, with a check at one time and a rapid start at another, yet on the whole in a rough proportion to the increasing numbers of the community. If the population grows each year at a rate of between 1,300,000 and 1,500,000, we shall have room for an increase, in round numbers, of about twenty million dollars a year in the money for every-day use.

Calculations of this sort are always uncertain, and the results just reached cannot pretend to anything but a rough approximation to the truth. But they rest on a fairly secure basis of fact, and certainly help in giving an answer to the question which has often been asked in recent years: How much additional money can be used and absorbed, under existing conditions, by a country growing as rapidly as the United States? Those channels of circulation in which alone the silver currency issued under the act of 1878 succeeded in making its way,—those, we may add, in which it is comparatively harmless, so far as the maintenance of the gold standard is concerned,—will take up twenty or thirty millions a year. In other words, so much additional money, in denominations of twenty dollars and less, might be put forth by the government year by year, and would find a steady and permanent use. In years of depression like 1884-85, it would make its way into circulation sluggishly; in years of great activity

like 1880–81, more could be easily absorbed; but the average would be somewhere near the figures just stated. It appears, then, that the issue under the act of 1878 was not on the whole excessive. By a lucky accident, it corresponded with sufficient closeness to what the community was in a position to use for its growing transactions.

VI.—The Act of 1890.

We have now completed the history of the first three periods in the silver situation, and may proceed to consider the fourth and last, in the midst of which we now are (November, 1891). The act of July 14, 1890, repealed the silver act of 1878, and so brought to a close the precise experiment tried under that measure. The new experiment has been in progress but a short time, and any discussion of its working at this early date must therefore be provisional. But the new act, notwithstanding some important differences, continues in essential points the policy of its predecessor, so that the working of the latter throws light on the events of the year just elapsed and on those to be expected in the future.

The act of July 14, 1890, is even more remarkable than that of 1878. It is unique in monetary history. It provides that the Secretary of the Treasury shall purchase each month at the market price four and a half million ounces of silver bullion. In payment he shall issue Treasury notes of the United States, in denominations of between one dollar and one thousand dollars. These Treasury notes, unlike the old silver certificates, are a direct legal tender for all debts, public or private, unless a different medium is

expressly stipulated in the contract. They differ from the silver certificates in another respect: they are redeemable either in gold or silver coin, at the discretion of the Secretary of the Treasury. The indirect process of redemption which, as we have seen, was applied to the silver certificates, is replaced for the new notes by direct redemption. The avowed object is to keep the silver money equal to gold, for it is declared to be "the established policy of the United States to maintain the two metals at a parity with each other on the present legal ratio, or such ratio as may be provided by law." The act of 1878 is repealed; but the coinage of two million ounces of silver into dollars is to be continued for a year (until July 1, 1891). Thereafter it is directed that only so many silver dollars shall be coined as may be needed for redeeming any Treasury notes presented for redemption. Practically this means that the coinage shall cease; redemption in silver dollars will not be called for under present conditions. The coinage of silver dollars accordingly was suspended by the Treasury on July 1, 1891; a change which was the occasion of some vociferous abuse and equally vociferous praise, but which in reality was of no consequence whatever.

The monthly issues of the new Treasury notes vary, like those of the old silver certificates, with the price of silver. But the new issues vary directly with the price of silver, while, as we have seen,[1] the old issues varied inversely with the price. The volume of Treasury notes issued is equal to the market price of four and one-half million ounces of silver. If silver sells at $1.20 an ounce, the monthly

[1] See p. 9, above.

issue of notes will be $5,400,000; if at $1.00 an ounce, $4,500,000. For a month or two after the passage of the act, the price of silver advanced rapidly, and at its highest, on August 19, 1890, touched $1.21. After September a steady decline set in, and during the present year (1891) the price has been not far from $1.00 an ounce. On the whole, the issue of silver currency (for by that name we may still call the new notes) has been, and probably will continue to be, at the rate of between fifty and sixty millions of dollars a year: about twice as large as was the issue under the act of 1878. And this great increase in amount is the most important difference between the two measures. The new method of making the additions to the currency is different from that of the earlier measure, and the Treasury notes of 1890 are different in externals and in some legal respects from the silver certificates of 1878: but the important difference in their effect on the community arises from the fact that their quantity is larger.

One change has indeed taken place in the working of the new act, apart from the increase in the issues: a change in the mode in which the banks have dealt with the Treasury notes. Shortly after the passage of the act, some sort of understanding seems to have been reached between the Treasury department and the banks of New York. The banks came to an agreement that the new notes were to be treated as "current funds," receivable in all payments, clearing-house settlements included. No doubt the change in legislation which made them a direct legal tender, and directly redeemable

in gold on demand, had something to do with this change of policy. That change leaves no ground for any distinction between the Treasury notes based on silver purchases, and the old United States notes, or greenbacks: both sorts of notes being legal tender, and both direct claims on the Treasury gold reserve. But the willingness of the banks to accept the new notes freely is also to be ascribed to their disposition to throw no obstacle in the way of the Treasury in its action under the new régime. The experiment of trying to keep the large issues of 1890 at par with gold is therefore being tried under conditions more favorable than those under which the old silver issues were put out. During the first year of the new experiment (1890–91) large quantities both of the new notes and of the old legal tenders were paid out by the sub-Treasury at New York to the banks of that city. Fully one-third of the payments were in those forms of money; a striking contrast to the almost exclusive use of gold in preceding years. Similarly the banks of New York, in settlements between themselves at the clearing-house, instead of using gold and gold certificates only, have made considerable payments in one or the other of the legal tender notes.[1] (See note page 54.)

Turning now once more to the chart, the reader will note the changes since the date when the act of 1890 went into effect (August 14). The unbroken line indicating the total silver currency makes a distinct angle at that date, soaring upward more rapidly, and so marking the greater issues of the new act. The dotted line indicating the silver currency outstanding responds to the upward movement,

though with some irregularities to be presently described in more detail. By far the most striking change, however, is in the gold reserve, which goes down sharply and almost without interruption from the middle of 1890 to the middle of 1891, touching in midsummer of 1891 a point very nearly as low as that reached in 1885. Between July, 1890, and July, 1891, it fell from one hundred and ninety mil-

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[1]From the Report of the Comptroller of the Currency for 1891 it appears that the payments by the New York sub-Treasury to the clearing-house were:

	Gold certificates.	Treasury notes.	Legal tenders and change.
In the year ending Oct. 1, 1890.....	249.6	4.5	1.3
In the year ending Oct. 1, 1891.....	138.8	41.1	25.0

The figures denote millions of dollars.

From the same source it appears that the balances between banks at the New York clearing-house were settled as follows:

	Gold certificates.	Treasury notes.	Treasury certificates for legal tenders.	Legal tenders and change.	Percentage of gold to total balances.
In the year ending Oct. 1, 1890............	1,735.3	6.9	5.0	5.8	98.4%
In the year ending Oct. 1, 1891............	1,028.4	102.4	353.5	100.2	64.9%

The figures again denote millions of dollars, except in the last column. The Treasury certificates for legal tenders, it should be noted, are now issued on the deposit not only of the old United States notes, but of the Treasury notes of 1890 as well.

lions to one hundred and seventeen,—a loss of over seventy millions in twelve months.

Another change took place during this same period, not shown on the chart, but closely connected with the decline in the Treasury gold,—a change in the character of the money taken in by the government for taxes. The receipts from customs at the port of New York indicate the nature of this change. Since 1885, when, it will be remembered, the gold receipts showed an ominous decline, the payments on account of customs had been almost exclusively in gold; and they so continued during the first half of 1890. The figures in the note show that in the fall of 1890 there was a distinct drop; then a recovery at the close of the year; followed in the first half of 1891 by an almost complete collapse, the percentage of receipts in gold going down to 60, 40, 20, and at last to 12 per cent. Through four months of the summer of 1891 the Treasury was receiving, at the point where more than half of its total revenue is collected, only 12 or 14 per cent. of gold, the rest being in silver certificates and in legal tenders of the new and old issues. In October there is a slight recovery in the gold receipts, and in November they again rise to over 40 per cent.; while the total gold holdings also show a gain in the autumn months.[1]

Such are the salient facts. For their explanation, account must be taken of the general conditions of the year. The first issues of the new Treasury

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[1]The following table shows the monthly receipts from customs at New York city since January, 1890, and the percentage of each kind of money received; the final column giving the net amount of

notes were made in the latter half of August, 1890. At that point in the year an upward movement in the silver currency in circulation generally begins. Since the autumn months, when the crops are moved, are almost invariably marked by a flow of currency to the West, it was to be expected that during this first stage there would be no difficulty in getting the new notes in circulation. The regular expansion of the silver currency accordingly took place. In November, 1890, however, came an event which had important effects on the Treasury as well as on the community: the collapse of the great banking house of Barings, which, though it led to no acute panic,

gold held by the Treasury at the close of each month. The figures in the first and last columns indicate millions of dollars.

Months.	Total receipts.	Gold coin. Per cent.	Silver coin. Per cent.	Gold certificates. Per cent.	Silver certificates. Per cent.	U. S. notes. Per cent.	U. S. Treasury notes. Per cent.	Net gold in Treasury, coin and bullion.
1890.								
January	15.2	0.1	0.0	92.5	2.8	4.6	....	177.3
February	13.8	0.1	0.1	95.0	1.8	3.0	....	188.0
March	12.5	0.1	0.1	95.7	1.4	2.7	....	185.3
April	13.6	0.2	0.1	95.4	1.6	2.7	....	186.2
May	10.6	0.2	0.1	93.6	2.5	3.6	....	190.5
June	14.4	0.1	0.0	94.5	2.7	2.7	....	190.2
July	17.1	0.1	0.1	95.3	2.0	2.5	....	184.1
August	12.9	0.1	0.0	91.7	1.7	3.0	3.5	185.8
September	15.7	0.1	0.1	85.5	1.4	1.9	11.0	148.0
October	16.0	0.2	0.0	80.9	1.3	2.1	15.5	156.3
November	10.1	0.3	0.1	80.4	1.7	2.9	14.6	162.4
December	10.7	0.3	0.1	87.8	1.9	3.0	6.9	149.0
1891.								
January	16.7	0.1	0.0	88.5	2.1	4.1	5.2	141.7
February	12.2	0.1	0.0	81.0	6.6	5.0	7.3	149.7
March	10.5	0.2	0.0	64.9	16.5	6.0	12.4	148.1
April	7.7	0.2	0.0	47.0	20.0	7.2	25.6	141.7
May	7.4	0.2	0.0	27.8	26.8	15.0	30.2	133.2
June	9.1	0.2	0.0	12.3	14.0	44.6	28.9	117.7
July	11.3	0.2	0.0	14.9	8.5	49.0	27.4	121.1
August	10.4	0.2	0.0	12.6	5.2	50.5	31.5	132.5
September	9.9	0.1	0.1	11.7	4.4	55.3	28.4	132.5
October	9.3	0.2	0.0	19.8	4.4	44.0	31.6	127.7
November	8.5	0.1	0.0	43.5	2.8	31.3	22.3	129.2
December	9.3	0.1	0.0	65.3	3.1	14.8	16.7	130.7

brought about many of the phenomena characteristic of a commercial crisis. At first, there was the call for ready cash which is usual under such circumstances. Bankers and others having heavy demand liabilities desired to increase their holdings of money, and the New York banks, in which the central reserve of the banks of the United States is kept, resorted to those expedients in the way of strengthening their reserves which experience has shown to be effective safeguards against acute panics.[1] The Treasury exerted itself also to tide over the emergency by paying out cash liberally, not only in its ordinary disbursements, but by the prepayment of interest on bonds. The disposition of banks in the interior to call back some part of their reserves from New York, combined with the usual westward movement of currency, tended to carry the various forms of paper money away from New York. Consequently there was no accumulation of paper and silver currency in that center, and the receipts at the New York custom-house continued to be chiefly in gold.

In the beginning of 1891 the situation began to change. The first stage of anxious uncertainty being over, money was no longer kept on hand in unusual amounts, by banks and financial institutions through the country and tended to return to the metropolis. With some general depression in business operations, cash in the hands of banks tended still more to become redundant, and to make its way to the central reserve depositories. The return

[1] As to the methods resorted to in the autumn of 1890, as well as at earlier dates, see the chapter on "Combined Reserves," in Professor Dunbar's "Theory and Practice of Banking."

of the currency which had gone to the West and South in the autumn strengthened the flow. Meanwhile the monthly issue of the new Treasury notes was steadily increasing the supply which sought to make its way into general circulation. Some other causes were also at work in the same direction. In September, 1890, a considerable volume of 4½ per cent. bonds, which then fell due, were continued at 2 per cent., and became advantageous as a basis for national bank notes; resulting in an increase, or at least a cessation in the decline, of that form of every-day money. The Treasury, moreover, was no longer in possession of any considerable surplus, and was not willing or able to do what had been done in 1885,—collect and hoard silver currency as it came into its hands. On the contrary, certain large payments of this time, notably those required by the act of 1890 for the repayment of the direct tax, were made in silver certificates. All these causes combined to bring about, during the first six months of 1890, a marked accumulation of various forms of paper in the hands of the New York banks.[1]

The inevitable outcome of the situation was that back-flow of silver and paper money into the Treasury which was noted a moment ago. As the silver currency accumulated in the hands of the banks, it was uesd by preference in making payments to the Treasury, their gold being naturally retained. In

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[1]The holdings of specie and legal tenders by the banks of New York at selected dates in 1890 and 1891 are given below. The specie may be assumed to be practically all gold. In the legal tenders, no distinction is made in the published returns between the United States notes of the old issue and the new Treasury notes; there

1891, as in 1885, the decline in the Treasury's gold receipts was the certain proof of a redundant issue of silver.

Under these conditions, the fact that the new notes were received by the banks from the sub-Treasury in settlement of clearings, was of sensible advantage to the government. Had the situation been the same as in 1885, when silver currency was not available in these payments, the Treasury must have been seriously embarrassed. In that case, it would have been paying out gold, and taking in silver and paper; a process which must have led speedily to a break-down of gold payments. As it was, the dealings between the Treasury and the New York banks during the first half of 1891 must have been chiefly in paper. Legal tenders of the old and new issues were travelling from the banks to the Treasury, and back from the Treasury to the banks; and the success of the government in maintaining its nominal willingness to pay gold to all comers was due to the forbearance of the banks. Gold was called for by them only when needed for export.

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being, indeed, no ground for any distinction between them. The figures indicate millions of dollars.

Date.	Specie.	Legal tenders.
1890. July 5	75.4	32.6
September 21	76.4	23.0
November 29	73.2	22.3
1891. January 3	78.6	26.6
April 11	76.7	33.0
May 29	61.6	43.3
June 20	65.4	49.2
July 25	68.3	53.1
September 12	61.7	48.0
October 12	70.1	37.7
November 7	81.9	29.2
December 12	89.8	32.5

As it happened, a turn in the balance of international payments, due chiefly to the complications brought on in Europe by the Baring failure, led at the same time to a heavy export of gold from the United States. The drain was exceptionally large, and fell entirely on the Treasury, whose gold holdings fell to less than one hundred and eighteen millions at the close of the fiscal year, on June 30, 1891. The Treasury had begun the fiscal year with an ample reserve of gold, and was able to part with seventy millions without public signs of embarrassment. But clearly, unless the gold reserve is brought back to the ample amount at which it stood from 1887 to 1890, a repetition of the experiences of 1891 will not pass by without more serious disturbance.

The autumn of 1891 has brought still another turn in the financial and industrial movement, which promises, for a time at least, to relieve the Treasury, and may be referred to here by way of further illustration of the working of the silver currency. The crop year 1891 promises to be similar to the golden years 1879 and 1880, marked by abundance in this country and scarcity abroad. The indications for 1891 are that exceptionally large sums of money will be called for to effect the usual autumnal payments in the West. It may be, also, that we are on the eve of a new period of prosperity in the agricultural regions, which will bring a general revival of activity, with its results of rapid increase in business transactions, revival of speculation, new investment of capital, and expansion of the circulating medium in every form. These conditions would undoubtedly make

more easy the absorption into actual circulation of the enlarged issues of silver currency. Some signs of a change in this direction are already evident. The balance of international payments has shifted again, and some gold has come back from Europe, showing its effects in the increased holdings of that metal, in November and December, by the New York banks. The decline, during these recent months, in the holdings of legal tenders by the banks, shows that these forms of money are making their way more readily into circulation through the country. The flow of gold into the Treasury responds to these conditions: the month of November shows a marked gain in the proportion of gold in the customs receipts, the rise being up to over 40 per cent. in the total for November, and 65 per cent. for December. It would be rash and idle to make predictions for the immediate future; and indeed this discussion of events too recent to permit a complete view, has been introduced only by way of further illustration of the variety of conditions which will affect the working of the new silver issues under the act of 1890.

VII.—General Conclusions.

If now we review the history of the silver situation, we find it leading to one conclusion much at variance with the usual expectations and predictions. The expansion of the silver currency has followed, and not preceded, the rise in prices, the speculative activity, and the other phenomena which are associated with an increase in the supply of money. The general impression derived by the

reader of most treatises and text books on political economy is that an increase in the quantity of money is the direct cause of a rise of prices. But the increase of our silver currency seems to have been effect rather than cause. When it was first issued, in 1878, at a time of quietude in business operations, it caused no expansion or inflation: on the contrary, the Treasury was unable to get the silver into circulation. When the general revival set in during 1880–81, it went into circulation rapidly and in large amounts; but the movement of silver followed, and did not precede, the general industrial change. When the period of depression began in 1884, the Treasury went through another period of slow circulation, and the regular issue of silver currency had not the slightest effect in checking the tendency to depression and falling prices. The attempt to get out the silver money simply led to embarrassment; it flowed back to the Treasury in tax receipts. The phenomenon repeated itself in 1890–91. The attempt to put forth more silver money has had the same effect as it had in 1885; it has caused a back-flow into the Treasury. For an easy and ready circulation of the new issues,—if that is to come at all,—we must await a revival of general industrial activity.

This contradiction between current expectations and the facts as they have actually appeared is a case of a sort not uncommon in the economic field. The growth of our knowledge, or at least its spread, has not kept pace with the development of the phenomena themselves. Explanations which held good half a century or a century ago, and were then propounded by the economists, have gradually filtered into popular knowledge; but by the time

they have become public property, the phenomena themselves have so changed that a new or modified explanation becomes necessary. That the general range of prices depends on the quantity of money, and that an increase in the quantity of money will bring about a general rise in prices, has become one of the commonplaces of economic theory. In this simple form of statement, "money" means what we usually denote by that term,—coin, government notes, bank notes. Five hundred years ago, even a hundred years ago, when almost all purchases were made with actual coin or notes, the proposition in all essentials was true. But the enormous development of credit in modern times compels a modification which has not indeed failed to receive attention from economic writers, yet has rarely been explained as fully, and certainly has not been kept in mind as constantly, as it needs be. The importance of the new conditions is indeed dawning on the public at large; but their full bearing is rarely perceived.

The true way to state the conditions on which, in our day, the general range of prices depends, is to compare the quantity of commodities offered for sale with the total volume of *purchasing power in terms of money*. In this volume of purchasing power, the largest item consists in our day not of actual money, but of credit in various forms. In countries like England and the United States, it consists chiefly in the form of credit supplied by deposit banks,—bank deposits and bank checks. That bank deposits and checks are the means of payment in all large transactions, and in many small ones; that the exchanges carried on through them are greater than those car-

ried on with any other form of currency; that they are completed, through the machinery of clearing-houses, with the use of an insignificant amount of coin or notes,—these are facts familiar enough. Indeed, the effects of credit as a substitute for money have been explained in economic text books so fully that they may be assumed to be well understood: it is the extent rather than the nature of the effects that needs to be insisted on.[1] At any one time, and for considerable lengths of time, the general range of prices, with a given volume of transactions, depends not on the quantity of money simply, but on the volume of credit used as purchasing power; and of this volume of credit the chief item in countries like England and the United States is bank currency in the form of deposits and checks.

In such a state of things the increase of other forms of currency can have, in itself, only a minor effect. Indeed, more than this; so long as the volume of credit, and especially that of the bank currency of checks and deposits, is not affected, there is a strict limit to the quantity of any other form of currency which will in fact be used. It is obvious, for instance, that the quantity of dimes and quarter-dollars which will keep in circulation in any community, at a given range of prices, is a definite and

[1] While the general effects of credit as a substitute for money have been much dilated on, the peculiar effectiveness of bank deposits as currency, and their preponderating importance in the machinery of exchange in England and the United States, have received comparatively little attention. For a systematic exposition, see Professor C. F. Dunbar's *Chapters on the Theory and History of Banking;* and for an examination of the part played by bank deposits as currency in the United States, see a paper by the same writer in the *Quarterly Journal of Economics*, vol. I, p. 401, July, 1887.

determined amount. People need a certain number of small coins for the convenience of making change. If more are issued than are needed for such purposes, the coins will not remain in circulation. They will accumulate in the tills of shop-keepers, street-car companies, and other receivers of small payments, and then make their way into the hands of the banks; finally, the excess will work its way into the government treasury. Under our very sensible legislation on subsidiary coins, the government not only issues such pieces in any quantity desired, but redeems them in any quantity. The amount outstanding is allowed to regulate itself, and, so far from being a factor in determining the general range of prices, is itself determined by the general range of prices. At a higher range of prices more of them will be called for, and the larger denominations may form a greater proportion of the whole; at a lower range of prices less will be called for, and in smaller denominations.

What is true of the subsidiary coins is equally true, in all essentials, of the dollar pieces, the five dollars, the ten dollars. The dimes and quarters and half dollars are the small change of the people; the dollars and five dollars and ten dollars are the large change. They, too, in a country where credit has reached as high a state of development as in the United States, are a sort of subsidiary money. Credit, chiefly in the form of bank deposits, is the main factor in effecting the ups and downs of prices; and the expansion or contraction of credit depends on conditions among which the quantity of money (in the ordinary sense) plays at any given time no important part. The quantity of money which may

affect its fluctuations is not, in any case, the general supply in the community, but the supply held as reserve against deposits in the vaults of banks. Even as to this, the connection with the variations in purchasing power used by the community in the form of bank deposits and checks is only a loose and indirect one.

At all events, the silver money of recent years has not had any direct effect in stimulating the growth of this bank currency, the largest and most important part of the circulating medium. The attitude of the banks toward the silver currency has prevented it from accumulating on their hands, or forming any part of their effective reserves. The contraction or expansion of the currency of bank deposits and checks has therefore not been directly affected by it. The silver issues have supplied, in great part, what I have called the large change of the community; but the total volume of the currency, and the general range of prices, have not been directly affected by them.

This is the key to the history of the silver currency under the act of 1878. It has not caused any expansion in prices. The volume used by the public has been effect and not cause. In times of activity, more of large change has been called for; in times of depression, less; but the large change, for which the silver issues have been used, were not the cause of either rising or falling prices. On the whole and in the long run, and barring periods of difficulty such as the years 1884-85, the quantity issued under the act of 1878 has not been greater than was readily used in the retail transactions of a community growing as rapidly in wealth and population as the United States. The contraction of the national bank notes

has aided in making a ready place for them in such uses. The silver currency under the act of 1878 has simply supplied the community with the increasing amount of money needed for its every-day retail transactions. What will be the case with the issues of 1890, remains to be seen.

It may indeed be said that in the absence of the silver there would have been severe contraction. Prices, in fact, have probably fallen somewhat, notwithstanding the silver issues,—a phenomenon of which the meaning will be discussed in the second part of this paper; and it may be said that the fall would have been even greater, and its effects more serious, if there had been no silver. But in that case it cannot be doubted that some other form of large change would have come into use. It is idle to say what sort of currency would have taken the place now occupied by silver: whether Congress might have rescued the national bank circulation from slow extinction, whether other forms of credit money would have been issued by the government itself, whether still larger amounts of gold would have flowed in from abroad. The only thing certain is that in a country like the United States no real inconvenience or suffering from a scarcity of this sort of money would have been permitted. The fact has been that the silver currency supplied the need, for good or evil, supplanting the bank notes, and supplementing the greenbacks.

VIII.—The Probable Future.—Free Coinage.

So much for the explanation of the past, from which we may turn to some consideration of the probabilities of the future. That consideration must

be brief, and must be rather a forecast of possibilities than a prophecy of events to come. The act of 1890 has practically doubled the issue of silver currency. What will be the outcome?[1]

In considering this question, account must be taken of the decline in the national bank note issues, which was, as we have seen, an important factor in the working of the act of 1878. That decline is likely to continue for a year or two to come, though probably not at so rapid a rate as in previous years. At the beginning of the current fiscal year (on July 1, 1891) there were outstanding about forty millions of doomed bank notes,—notes given up by the banks, for whose redemption the Treasury has become responsible. They come in for redemption at the rate of between fifteen and twenty millions a year. As they are gradually redeemed, room will be made for an equal amount of Treasury notes. Some further decline in the bank note circulation will take place in the future, though probably at a slackening rate; and for two or three years this opening for an easy circulation of a certain volume of silver issues will continue to be available. So long as this is the case,

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[1]There are some minor sources of possible addition to the silver currency, which may be briefly referred to here: (1) In a rider to an appropriation act passed at the session of 1890-91 Congress directed that the trade dollars redeemed under the earlier act of 1888, should be coined into standard silver dollars. The bullion in the trade dollars amounts to some five millions, against which, when coined, silver certificates may be issued. (2) There has been a profit, or seniorage, on the silver dollars which were coined under the act of 1890, between its passage and the cessation of coinage on July 1, 1891. Against this profit, amounting to four and one-half millions, the Attorney-General has concluded that the Treasury can also issue silver certificates. Of course it does not follow that these amounts will be put into actual circulation.

the net addition to the currency will be less than the total issue of Treasury notes. For the immediate future, the allowance on this score will be about the same for the present issues as it was for those before 1890.[1]

Some allowance must perhaps be made for the change in the policy of banks in regard to the new notes, which may lead to a wider use of them in bank reserves and in clearing-house settlements. We have seen that the banks of New York have not only accepted the Treasury notes of 1890 in payments from the Treasury, but have used them in settlement of clearing-house balances among themselves. A general use of the new notes for bank reserves and payments obviously would open a new place for their absorption, and would aid in preventing them from becoming redundant. The cash holdings of the banks increase year by year with their increasing deposits and business; not indeed in the same ratio as the increase of their business, yet in some proproportion to it. If the new notes should be freely held by the banks, their absorption into use would

[1]The changes in the national bank circulation in the year 1890–91 are indicated by the following figures:

	Oct. 31, 1890.	Sept. 9, 1891.
Gross circulation	179.8	167.3
Net circulation	125.0	127.2

The difference between the gross circulation, or total of notes in circulation, and the net circulation, or total of notes based on the deposit bonds by banks, is now about forty millions. This is the amount of the "doomed" issue, consisting chiefly of notes given up by the banks. The banks have deposited legal tender money for redemption of these notes with the Treasury. By a section of the silver act of 1890, the sums so deposited are not held separately as a trust fund by the government, but are covered into its general

be easier than that of the silver certificates was; and, moreover, their effects on trade and industry might be different. Whether the change in policy among the banks of the financial centers will bring about such results, remains to be seen. But the events of the spring of 1891, described in the preceding pages, indicate that the new notes will not form any considerable part of the holdings of the banks; or if they do, that they will simply displace an equal amount of the old legal tenders, formerly so held, and release the latter for every-day circulation. On the whole, the conditions affecting the circulation of the new issues will probably not be substantially different from those which the history of the silver certificate has revealed.

This is not the only element of uncertainty among the factors on which the working of the new issues will depend. No one can foresee what will be the growth of the population and industry of the country; what will be the nature or the amount of the currency which, under the present standard of value, will be called for by the convenience of the

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cash, and the government redeems the bank notes from its general cash as they are presented.

The net circulation has increased slightly during the year, chiefly because the continuance of a large sum of 4½ per cent. bonds at 2 per cent., which has enabled the banks to maintain old circulation, or issue new, without loss. The net circulation may still shrink in the future, though not much. A minimum deposit of bonds is required of every national bank, against which it may issue notes; and this amount of issue may be called the minimum, or required, circulation. Under existing legislation, this minimum circulation for the national banks now doing business is about ninety-two millions, against an actual circulation of about one hundred and twenty-seven millions. There is therefore room for a possible, though not probable, decline of over thirty millions more.

public; what will be the alternations of business activity and depression; what will be the fluctuations in international trade. Prediction in regard to the effects of the legislation of 1890 is therefore nearly as hazardous as prediction would have been in 1879 in regard to the act of 1878. To assert unflinchingly that the issues of 1890 will be excessive, would be rash.

Nevertheless, the experience under the act of 1878, as it has been described in the preceding pages, gives important clues. All the indications seem to be that the issues of 1890 will be excessive in a sense in which those of 1878 were not. Fifty-five million dollars a year of new currency is more than even a community like the United States can easily absorb in its growing use of large change. Unless Congress wipes out entirely the national bank notes or the old legal tenders, or unless a remarkable change takes place in the habits of the community, the issues will hardly be able to circulate in the channels in which the old silver certificates and dollars found their easy place. They will be redundant. Apparently, some signs of redundancy have already showed themselves, in the events of the spring of 1891. The final effect of excessive issues must be to drive out gold on the one hand, and to cause a rise in the general level of prices on the other hand. These final effects,—if such they are to be,—may now engage our attention.

Whether or no the ultimate consequences are clear, the precise mode in which they will be brought about certainly is not clear. That the immediate occasion and the immediate effects of a suspension of gold payments by the Treasury are not easy to fore-

cast, is evident from the striking inconsistency in the predictions made by those who agree in thinking the result a catastrophe. On the one hand, we are told that the effects will be similar to those of the issue of inconvertible paper: inflation, speculation, feverish activity, eventual collapse. On the other hand, we are told to expect contraction. Gold, it is said, will disappear from circulation, and a sharp fall in prices will ensue. The uncertainty as to the probable immediate effects of the change from a gold to a silver standard, of which these different predictions give evidence, are the result largely of the same fundamental misconception of money and monetary phenomena to which I have already referred,—the failure to recognize the vital part played by bank currency in the form of deposits and checks. Any attempt to reach conclusions as to the effects of the new notes, which neglects to consider this part of the medium of exchange, must be futile. But the operation of this medium is of a peculiarly unpredictable sort. Its expansion or contraction depends, to repeat once more, not on the quantity of "money" in the ordinary sense, but mainly in the temper and the expectations of the banks and of the business public. These are things impossible of prediction. The best that can be done is to point out how matters will work under one or two probable sets of circumstances; and this form of prediction I will venture on.

In the first place, we may suppose the time when notes reach the stage of issue in excess of the demand for large change to be one of the ordinary periods of depression and business inactivity, such, for example, as has prevailed during the greater

part of 1891. At such times the banks have plenty of cash in their vaults; they find it difficult to induce business men to increase their credits and deposits; the industrial current is sluggish, and is not easily moved by a fresh inflow. The notes which the government would pay out to bullion-sellers, or to other creditors, would accumulate in bank vaults, and thence more and more of them would flow back into the Treasury. A larger and larger proportion of the government's revenue would be received in these notes, or in some sort of money other than gold. Meanwhile, gold would be paid out to such as called for it. If the period happened to be one of an unfavorable balance of trade, and if there were a need of shipments of money abroad, the drain would fall entirely on the government. By a process of this sort, the Treasury might be drained of its gold, and brought to a suspension, while yet no effects in the direction of inflation or of rising prices has showed themselves.

Assume now conditions of a different sort: good times and active business, hopefulness on every side, large new investments of capital, a burst of speculative activity. An additional amount of large change will then find its way into use with greater ease. At the same time, accommodation from the banks is in demand, their loans and deposits increase, their reserves are small in proportion to deposits. These are the conditions under which a free use of the new notes by the banks would be most likely to have important effects. If the new issues, so far as not absorbed by the public, were readily used by the banks for reserve, they would aid in enabling bank loans and deposits to mount higher and higher.

Then both forms of the currency would expand: both the money of every-day use, and the bank currency of large transactions. All the phenomena which precede a commercial crisis might be looked for,—active speculation, more or less of rash investment, over-trading, rapidly rising imports. The rise in imports would necessitate sooner or later an outflow of gold; while the speculative activity would culminate in the crisis. The drain of gold, which might come before the crisis and so aid to precipitate it, or might come after it in the subsequent period of dullness, must fall on the Treasury. In this case, the phenomena of inflation and rising prices precede the conditions under which a suspension of gold payments by the Treasury becomes possible or probable.

If the stage of suspension of gold payments were reached, the immediate results in all probability would not be of a disastrous sort. Gold would doubtless command at once a premium over other forms of money. The extent of that premium would depend partly on the urgency of the needs of bankers, importers, and others having gold payments to make abroad or at home; but it would be in large part a matter of speculation as to the future policy and the financial prospects of the Treasury. Gold would not disappear from circulation, for the simple reason that there is none of it in circulation to disappear. It would carry us too far from our subject to examine the extent and location of the gold supply in this country. The Treasury officers publish regularly certain statements as to the amount of gold in the country, of which I can here say only that they rest on an uncertain basis, and in my opinion exaggerate our holdings of that metal. At all events, the

only amounts of substantial importance for the currency situation are those held by the banks and by the Treasury.[1] The amount held by the Treasury, after the suspension of gold payments, would be simply a hoard. That of the banks would continue to perform, after the breakdown as before, the function of a reserve for deposits. No depositor or creditor could get hold of it; if he insisted on payment from his bank, in expectation of getting gold, he would receive only "current funds," which would be at a discount compared with gold. If the premium on gold lasted for some time, if the Treasury failed to resume, or if Congress took no steps toward a return to gold payments, the banks doubtless would dispose of their gold from time to time at a premium, and reap the profit of the operation. This was their good fortune during the Civil War, when, at one time or another between 1862 and 1865, they disposed of their gold at a high rate in exchange for the depreciated greenbacks.

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[1] For July 1, 1891, the Director of the Mint estimated the monetary stock of gold in the United States thus:

In the Treasury	239.3	millions.
In national banks	94.4	"
In other banks and in individual hands	312.9	"
Total	646.6	"

The stock here credited to the Treasury is that physically in its possession. Of this stock, the Treasury owned, deducting gold certificates outstanding, 119.2 millions; while the national banks owned, adding gold certificates held by them, 158.3 millions.

It will be seen that three hundred millions are stated to be in "other banks" (state and private banks) and in individual hands. There are no means of ascertaining with accuracy how much gold these "other banks" held; but if gold bore the same proportion to their total cash, as the gold held by national banks bore to the total cash held by these, they would have had in the neighborhood of fifty millions of gold coin. (See the figures given by the Comp-

The question is now easily disposed of whether there might be a contraction of the currency in consequence of the suspension of gold payments. It has just been said that there would be none from the disappearance of gold. But there might be a contraction of credit which would have the same effect,—indeed, a greater effect than a diminution in the quantity of coin or of paper money. The final step of suspension of gold payments by the Treasury might cause, more or less reasonably, an uneasiness among the mercantile public, the banks, the foreign and domestic holders of securities, which would lead to a sharp contraction of credit, and especially of bank credits and deposits. Such a change would mean a real, perhaps a serious, contraction of the circulating medium, and a real fall in prices.

Certain other factors may be noted, affecting the permanent and the temporary situation of the Treasury under such contingencies as have just been described. At any given time, the financial condition of the Treasury will be of importance. A large

troller of the Currency in the *Finance Report* for 1890, p. 439.) This would leave probably two hundred and fifty millions of gold,—certainly a good deal over two hundred miliions,—"in individual hands," that is, in every-day circulation. As the total bank note circulation at the same date was one hundred and eighty-six millions, of which over twenty millions was in bank vaults, we should expect gold coin to be at least as plentiful in every-day circulation as bank notes. But certainly it is not so common. Except on the Pacific coast, it is very rarely seen. Some sums may be in hoards; yet any considerable amount of hoarding in a community like the United States is exceedingly improbable. It is much more probable that there is a mistake in the official estimates. These rest on intricate calculations as to the imports, exports, domestic production, consumption in the arts, and other factors, some of which bring large possibilities of error. On the whole, I have little doubt that the Treasury estimate is greatly in excess of the actual stock.

surplus, or a large excess of revenue over payments, will enable it to hold its own and maintain gold payments without serious difficulty under conditions which would lead to a break-down if the cash holdings were small and the expenditure exceeded the revenue. In 1884–85 and in 1890–91 the outcome would have been at least uncertain, if the Treasury at both times had not begun with a large accumulation of gold. Further, it is conceivable that a drain setting in at a time when the Treasury gold is low, may be met, and embarrassment for the time being warded off, by a process of borrowing gold, or of selling bonds for gold. It has been suggested that the resumption act of 1875 authorizes the Secretary of the Treasury to sell bonds at his discretion for the purpose of redeeming United States notes of the old issue, and that this power might be exercised to enable the Treasury, if in straits, to secure an additional stock of gold. It is by no means clear that such a power is conferred by the resumption act. Yet the present Secretary of the Treasury has publicly intimated his intention to resort to this power in case of need; and some such expedient might serve to tide over a period of temporary embarrassment, or ward off for a time the results which may be expected from permanent sources of danger.[1]

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[1]In a public address at the dinner of the New York Chamber of Commerce, on November 17, 1891, Secretary Foster stated his opinion that the resumption act gave authority for the issue of bonds to replace or increase the reserve fund of one hundred millions, and intimated that he would make use of the authority in case of need. The language of the resumption act is that "to enable the Secretary of the Treasury to prepare and provide for the redemption" of the notes, he is authorized to sell bonds "to the extent

A permanent break-down of gold payments by the Treasury, and a permanent adjustment to a silver basis, can come only from a foreign drain of gold. It is true that a suspension is possible without it. A heavy deficit in the finances might lead to it; or an inpouring of notes and silver, instead of gold, in the tax receipts. From embarrassments, however, due to these causes, uncomplicated by a foreign drain, the Treasury may recover with comparative ease. But if the gold does not stay in the country, and flows abroad, the loss and the danger are permanent. A foreign drain may come at any time, and from various causes: from higher prices leading to heavier imports, from short crops, from heavy sales in this country of securities held by foreign investors, from a foreign war causing a demand for ready cash in the commercial centers of Europe. Any gold that flows abroad is not likely to return. It would be rash to say that the return of part of it is impossible or improbable; but our issues of Treasury notes are filling up the channels of circulation so rapidly that its return is improbable. Exceptional conditions of international trade, such as those which promise to prevail during the fiscal year 1891–92, may indeed reverse the normal state of things, and cause a large quantity of gold again to flow to the United States. The possibilities in this direction have already been referred to, and serve to emphasize what has been said more than once in this paper as to the hazard of specific prediction in regard to the results of any monetary experiments.

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necessary to carry this act into full effect." It may be a question whether the language confers authority to sell bonds for an indefinite period after resumption has once been accomplished.

The doubts which have been expressed in the preceding paragraphs as to the mode in which the issues of more silver money will work, and the corrections which have been suggested as to current predictions and expectations, may leave the reader uncertain whether there is anything clear and specific to be said as the effects of the silver legislation. But it is only as to the promptness of the effects, and the mode in which they will be brought about, that there need be any real doubt. As to the eventual outcome, we may speak without reservation. Eventually, it remains true that an increase in the quantity of money leads to higher prices. In any community whose habits and ways in the use of credit are constant, the superstructure of credit will be, in the long run, proportional to the amount of money permanently outstanding. A permanent increase in the coin forming the basis of the machinery of exchange will be followed by an expansion of credit, both in the form of bank credit and in other forms, and by a rise in prices. The correspondence between the increase in the quantity of money and the rise in prices will show itself only in the course of time, and will probably never be exact; but in the long run there will be some rough sort of correspondence.

The extent of the rise in prices, however, is another subject on which it is hazardous to make any attempt at precision of statement. The premium on gold is usually assumed to measure the depreciation of inconvertible paper or of a silver currency. But the real depreciation, and the serious effect, of the issue of more money, is in the general rise of prices; and of this the gold premium is by no means an accurate gauge. We have seen

in the preceding pages, that the gold premium may set in during a period of depression, of restricted credit, of falling prices; while, on the other hand, a rise in prices, partly the effect of new issues of silver notes, may exist for a time without the accompaniment of a gold premium. Eventually, no doubt, the steady excessive issue of silver notes would bring about both the gold premium and the higher prices. No doubt, too, if the suspension of gold payments proved permanent, the gold premium would correspond pretty closely to the difference between the intrinsic values of the gold and silver dollars, as measured by their power of purchasing commodities. General prices and money incomes, in other words, would rise in about the same proportion as the gold premium. But the rise would be different with different articles, and would take place more slowly with some than with others. It would never show that uniform adjustment to a higher level which we are sometimes to expect. Money incomes, wages, rents, as well as the prices of commodities, would gradually rise, some more, some less, by an irregular and perhaps spasmodic process. Wages of manual laborers probably would advance late; though this again would depend on the state of the demand for laborers, and on the effectiveness of the labor organizations. It would carry us too far to enter into a discussion of the process by which a general rise or fall in prices and money incomes are brought about. Briefly, it may be said that so far as commodities which are the subject of international trade is concerned, the changes in prices would accommodate themselves with comparative rapidity and exactness to the gold premium. Exports and imports would

be on the silver basis more quickly, other commodities, and general money incomes, much less quickly and exactly. In the end, the general rise would ensue.

One subject more may be touched on, before concluding the first part of this paper, namely, the probable working of an act for the free coinage of silver at the present ratio. The consequences of such a measure would differ in degree rather than in kind from those likely to ensue from the present legislation. The break-down of the gold standard would come sooner; the effect on general prices would also ensue, though less promptly and less certainly.

If a measure for free coinage should pass, it would probably contain provisions similar to those of the act of 1890, for the issue of paper representations of silver. Legal tender notes of any desired denomination would be given in exchange for deposits of silver from any quarter and in any amount, at the rate of one dollar for each 371½ grains of pure silver, or 412½ grains of standard silver. The result must be the issue of more currency than is now put forth, and a hastening of the effects. No doubt we cannot be sure that the flow of silver to the United States mint would be as prompt and as enormous as is sometimes predicted. It is impossible to say how great and how rapid the presentation of silver would be. For one month or for six months, perhaps even longer, the amount presented might conceivably not be such as to swamp the Treasury, and for a while the predictions of the free silver advocates as to the concurrent circulation of silver and gold might be

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fulfilled.[1] I do not indeed believe that such a temporary success would be attained; for the passage of the measure might be expected to ruin confidence in the Treasury's ability to maintain gold payments, and to lead to the presentation for payment in gold of greenbacks and Treasury notes now outstanding. But even if this direct cause did not bring about the break-down of gold payments, the indirect one of cessation of gold receipts by the Treasury would speedily bring it about. The United States would be the tempting market for the disposal of all the silver in the world available for transmission to this country; and the inflow of silver could not fail in a very short time, by one process or another, to destroy the Treasury gold reserve, and so put an end to the gold standard.

But while the break-down of the gold standard and the appearance of a gold premium would be the early, if not the immediate, results of free coinage of silver, the effects on general prices would be much less prompt. It is not necessary to repeat the grounds for this statement. The part which the silver coin or notes would play in the circulating medium would be the same as that of the silver currency of the past and present, and the action of credit payments and of bank currency must again be taken as much into account. The train of events to be expected would be in essentials

[1]The reader will find an able and ingenious argument to show that free coinage would not drive out gold, in the report of the minority of the Committee on Coinage on the silver bill of 1890-91; printed in *Reports of Committees*, *51st Congr.*, *2nd session*, Report No. 3967, pp. 15-30. For a sober statement of the probabilities the other way, see the testimony of Mr. Leech, the Director of the Mint, in the *Hearings* appended to the same report, pp. 32-36.

similar to those sketched already, as likely to follow from the present issues. In the first instance, we might look for falling rather than for rising prices. The break-down of the gold standard might easily be followed by a shock to confidence and a contraction of credit which would cause prices to fall. Eventually, it is true, when the gold premium had become definitive, and the commercial and financial world had accommodated itself to the new basis, we should reach that era of higher prices which it is the object of the free silver advocates to secure. But the era would not come with the mechanical precision which they expect. It would come gradually, by movements affecting first one group of commodities and then another, very likely with occasional relapses to lower prices. The final outcome would probably be delayed so long, and be so much covered up in the meanwhile by other causes affecting the general range of prices, that the ardent champions of free silver would be grievously disappointed in the immediate and visible effects of their panacea.

PART II.

THE ARGUMENT FOR SILVER.

I.—The Bimetallist Arguments.

We turn now to the second main division of this paper: the discussion of the general questions of policy involved in the currency controversy. Is it desirable that we should have more money? Does the maintenance of the gold standard involve injustice or hardship to debtors, or to any class in the community? Does it have any ill effects in hampering industry or checking the advance of production? Is the free coinage of silver, or any measure leading ultimately to a silver basis, fairly open to the objections commonly urged against it on the grounds of dishonesty and injustice? And what, on the whole, is the best method of dealing with the silver problem?

In considering these questions, we must look to the ultimate and permanent results of the silver standard. The details discussed in the first part of the present paper, as to the mode in which the silver issues circulate and the degree of promptness with which they will affect prices, are here of no great importance. Under a silver standard the rise in prices will take place in the end; and we are concerned with the social consequences of such an eventual result.

One word more by way of introduction to this subject. I shall not endeavor to discuss all of the

arguments used on one side or the other, still less to repeat the elementary reasoning which suffices to dispose of many of them. We have had in the last year or two a revival of the crude talk of which so much was heard in the days of the inflationist movement, about the blessings of a large supply of money, the lowering of the rate of interest by increasing the currency, and indeed the attainment of universal prosperity by the simple process of putting forth an abundance of money. The same ancient fallacies which were advanced in the years from 1867 to 1879 to show that plenty of greenbacks were the one saving thing for the republic, re-appear now to show that plenty of silver will save us from ruin. The reader who wishes a discussion of arguments of this sort must turn to the books on the elements of political economy.

I propose here to take up chiefly one set of serious arguments,—those which rest on the changes in general prices which have taken place throughout the civilized world in the last twenty years. The conclusions in favor of a wider use of silver, drawn from such changes, have been maintained by distinguished economists. It is true that the particular plans for the use of silver which are now in vogue in the United States have generally been opposed by these economists. They have urged international agreements for the wider use of silver, and have deprecated independent action by any one nation. But the more thorough-going advocates of free silver in the United States say, certainly with much force, that an international agreement has proved to be simply impracticable, and that if the wider use of silver is to be deferred until there is concerted

action by the great nations, it will never come. If anything in this direction is to be done, some one country must be courageous enough to take the lead, trusting that others will follow in due time. And certainly it is true that the scheme for international bimetallism has practically no prospect of adoption; while, on the other hand, the serious arguments urged by its advocates tell, in some degree, in favor of any scheme for enlarging the use of silver as money. These arguments, moreover, are of weight, and deserve a more painstaking consideration than is often admitted by those who oppose the silver legislation ofthe United States.

The serious and important arguments, then, among those who, both in this country and in Europe, advocate a greater use of silver as money, are derived from the general fall in prices which has been so conspicuous among the economic phenomena of the last twenty years. To that fall they ascribe two evils: first, an unjust increase in the burdens of debtors; and, second, a check to enterprise and to the efficient working of the productive machinery of the community. The increase in the burdens of debtors is one which all economists have pointed to as the result of a general fall in prices, or rise in the value of the circulating medium. The debtor who borrows a hundred dollars now, and repays them five years hence, when all prices have fallen, gives back more than he received. On debts running for short periods of time, changes in general prices are not likely to be great enough to cause serious hardship; but on debts running over long periods the loss to debtors and the gain to creditors will be great and continuing. But such a steady and continuous fall,

it is urged, has taken place since 1873; and the fall is likely to continue further, and to renew its hardships on each new act of borrowing, because its cause is a permanent one. That cause is found in the growing scarcity of gold, which has been selected as the sole standard of value among civilized countries. The production of gold, after having increased with great rapidity in the twenty years following the Californian and Australian discoveries in 1850, has gone on but slowly since 1870. Meanwhile, the population of the civilized countries, their wealth, their production of commodities to be exchanged, have increased with extraordinary rapidity; while the adoption of the gold standard by Germany in 1873, and the resumption of specie payments by the United States in 1879 and by Italy in 1883, have added to the demands for which the scanty annual supply of gold must suffice. Hence the general fall in prices; in other words, the appreciation of gold.

The second effect of the appreciation of gold, in checking industrial progress and promoting industrial depression, has been less insisted on in the United States than in European countries. The classic economists had generally reasoned that a general rise or fall in prices was indifferent, except in regard to the relations of debtor and creditor. If money became scarce, if its value rose and all prices fell, every producer, to be sure, would receive a smaller money income than before, and would have a smaller money capital. But he would be able to buy as many commodities and as much labor as before, and would be in reality just as rich and prosperous. In the middle of the eighteenth century, when economic thought was just beginning to assume its

modern form, David Hume had argued that though a fall in prices is at bottom indifferent to everybody (except as debtor or creditor), it would yet, in its effects on men's spirits and expectations, which are all connected with money and with terms of money, exert a depressing influence on industry, and would so be harmful; while rising prices, though also really indifferent to all, would stimulate hope and confidence, and so arouse to more active exertion and more plentiful production. The younger Mill, in his Political Economy, thought it worth while to enter on a careful refutation of Hume's reasoning. But the bimetallists of our time are disposed to agree with the shrewd Scotchman. They say that the active manager of industry, the business man or entrepreneur, in the first place is always more or less in debt; in the second place, is always buying labor, or materials, or goods, with the intention of selling a product at a later date at an advance in price. He habitually measures his gains in terms of money, and not in terms of the commodities he can buy with the money. In times when prices are falling, he finds it harder to meet his debts, and to dispose of his goods in hand at a money advance over what they cost him. But the business man, or entrepreneur, in our day is the director and initiator of industry. He employs labor, borrows capital, sets the wheels of industry in motion; it is his expectations and fears and hopes which determine primarily whether the investment of capital shall take place in large or small amount, and whether the machinery of production shall move smoothly and effectively, or slowly, hesitatingly, inefficiently. The argument certainly does not lack plausibility; nor can it be said to have

often been squarely met. No doubt it takes the form, in the United States, more frequently of confused encomiums on the inspiriting effects of plentiful money, than of direct reasoning as to the ill effects of too little money, such as I have endeavored to state with fairness in the preceding sentences. Yet it does not lack weighty backing. So eminent an economist as President Francis A. Walker has, within a year, insisted on the evils of a deficient supply of money as strangling the arteries of industrial life.[1]

On the whole, however, the other argument, bearing on the increase in the burdens of debtors under falling prices, has been more often heard in the United States, and certainly has been of more effect. Prosperity, activity, general industrial advance, have been in this country so great and so obvious that the argument as to any check to industry could take serious hold only in occasional periods of de-

[1] "The money supply is not a matter of no consequence. Alike considerable excess and considerable deficiency inevitably become the source of direful ills and woes unnumbered. If of an irredeemable and fluctuating paper currency, that alcohol of commerce, it can be said that 'it biteth like a serpent and stingeth like an adder,' with equal truth may it be added that strangulation, suffocation, are not words too strong to express the agony of the industrial body when embraced in the fast-tightening folds of contracting money supply.

"Unfortunately those who should now be on deck as pilots to guide the ship of State through the narrow sea that separates the whirling gulf of silver monometallism, with a premium on gold and a debased coinage, from the bare and jagged rocks of gold monometallism, with increasing monetary stringency and falling prices, have discredited themselves with captain and crew by denying the very existence of Scylla, and declaring that on that side is the broad and open sea" Address of President Francis A. Walker before the American Economic Association, December 26, 1890; in the *Publications* of the Association, vol. VI, p. 32.

pression or slackened advance. The burden on American debtors from falling prices has therefore been much more steadily complained of, chiefly in regard to the debts of the farmers and other borrowers on a comparatively small scale. No doubt there are other debtors whose burdens are affected at least as much, notably the railways, among whom the practice of borrowing heavily on long time has sometimes had its serious effects. But it is the farmer whose case has received most attention, and in some ways doubtless has deserved it most.

The discussion of the relations of debtors and creditors under the gold standard has led to some further conclusions as to the "honesty" of the gold and silver standards. Those who oppose a silver basis speak of the silver dollar as a "dishonest" coin. But those who attack the gold standard retort that the really dishonest dollar is that of gold. It is pointed out by them that the fall in the price of silver which has taken place since 1873 has not been greater than that in the prices of commodities generally. As compared with commodities, therefore, silver has been more steady in value than gold. The fall in the gold price of silver, which is adduced by the monometallists to show that silver is not a good standard of value, is said to be the very thing which proves it to be a good standard of value; for a given amount of silver will buy the same amount of commodities, roughly, as it would twenty years ago, while a given amount of gold will buy more. If debts had been expressed in terms of silver, the debtor would have had to repay the creditor the same amount of commodities that he received,—not more commodities, as he has had to do, with debts

measured and repaid in terms of gold. So far as the attainment of the closest possible approach to ideal justice is concerned, a silver standard would have served the purpose better than a gold one.[1]

II.—The Effect of Improvements in Production.

The bimetallist agitation for a return to the wider use of silver concurrently with gold first became prominent in the years of depression which followed the crisis of 1873. For some time those who opposed it took the ground that the alleged evils did not exist,—that in fact there had been no permanent fall in general prices. The decline in the years after 1873 was supposed to be simply the usual reaction from the rise in prices which marks a period of speculative activity. It was expected that the upward movement of the next period of activity would bring the average range of prices as high as it had been

[1]It would extend this paper to undue length if I were to enter on any detailed consideration of the intricate questions which arise in regard to the history and statistics of general prices. By far the best and most convenient source of information is Professor Soetbeer's well-known *Materials on the . . Precious Metals and the Question of Standards*, published in Germany in 1887. An English translation is in Mr. Edward Atkinson's Report on Bimetallism in Europe, printed in the United States Documents, *Senate Exec. Doc.*, 50*th Cong.*, 1*st session*, *No.* 34. For convenience of reference I give below Professor Soetbeer's "index numbers," indicating the average annual prices of 114 articles at the free port of Hamburg: undoubtedly the most complete and satisfactory compilation of the sort which has yet been made. The figures, as given in the Materials, run through the year 1885. For the years from 1886 to 1890 I have added index numbers based on the same sources, which Professor Soetbeer has kindly supplied to me. Unfortunately the material on which these figures are based has not been available since 1888.—I need hardly say that the method of measuring prices by index numbers based on simple arithmetical

before. The general revival which set in after 1879 in all civilized countries did indeed check the downward tendency, and in some countries brought about an appreciable rise. But this counter-movement by no means offset the marked fall which had preceded it; and in any case it soon came to an end, and was followed by a new fall, which has continued with no considerable interruption to our own time. It is true that some part of the fall is no more than a recoil from the abnormally high prices of the years 1871–73. It is true, also, that some commodities have shown a tendency to rise, and that in one very important respect,—in money incomes and the money rate of wages,—there has been a striking exception to the general movement. Further, it

averages is far from perfect. The figures are given chiefly by way of illustrating in some concrete way the tendency to falling prices.

For convenience, I have added the price of silver in terms of dollars per fine ounce, as given by the Director of the United States Mint.

	Index number of general prices.	Price of silver per ounce, in terms of gold.
Average of 1847–50	100	
" " 1851–55	112.22	
" " 1856–60	120.91	
" " 1861–65	123.59	
" " 1866–70	123.57	
Year 1871	127.03	$1.326
" 1872	135.62	1.322
" 1873	138.28	1.298
" 1874	136.20	1.278
" 1875	129.85	1.246
" 1876	128.33	1.156
" 1877	127.70	1.201
" 1878	120.60	1.152
" 1879	117.10	1.123
" 1880	121.89	1.149
" 1881	121.07	1.138
" 1882	122.14	1.136
" 1883	122.24	1.110
" 1884	114.25	1.113
" 1885	108.72	1.065
" 1886	103.99	.995
" 1887	102.20	.978
" 1888	101.93	.939
" 1889	106.13	.935
" 1890	108.13	1.046

must be borne in mind that even the lowered level which has now been reached cannot be described as abnormally low, being still as high as that which obtained at the middle of the present century. But on the whole, the fact of a general fall in the prices of commodities during the last fifteen or twenty years cannot be denied. The fall has not been uninterrupted; it has not been so rapid or general as to bear on the face of it proof of harmful results; but it has been steady, and, in the opinion of the present writer at least, is likely to continue slowly and steadily for some time to come.

Recently, therefore, those who combat the bimetallist reasoning have taken a different position. They have reasoned that while prices may in fact have gone down, the fall is not due, as the bimetallists allege, to an appreciation of gold. It is to be accounted for, they say, by other causes, notably by the extraordinary improvements in the production of commodities. New inventions and the perfecting of old ones have cheapened almost all manufactured articles. Raw materials and food products have been cheapened partly by the discovery of new sources of supply, and partly by that improvement which has been transforming the industrial situation more radically than any other,—the wonderful cheapening of transportation by railways and steamships, which has made the resources of the plains of our West and of the sheep-runs of Australia available for the supply of the markets of London and New York.

So far as this train of reasoning undertakes to explain the mode in which the fall in prices has been brought about, it seems to me impregnable. But in

so far as it endeavors to disprove the appreciation of gold, or to show that the general fall is not due to this appreciation, I have never been able to see its force. In truth, both the bimetallists and their opponents seem to confuse the question when they speak of the appreciation of gold as causing lower prices. The appreciation of gold *is* the general fall in prices. The two are not related as cause and effect; they are simply two names for one and the same thing,—namely, a different rate of exchange between gold on the one hand and commodities in general on the other, by which the same amount of gold buys more commodities than before. When the general fall in prices is admitted, the case of the bimetallists as to the appreciation of gold is established once for all. Improvements in the production of commodities may explain how it happens that they are more abundant, and exchange on less favorable terms with gold, of which the quantity has not been increased by new rich mines or great improvements in production; but the fact of the depreciation of commodities, or of the appreciation of gold, is not thereby explained away.

Nevertheless, the improvements in production do seem to me to have an important bearing on the question in hand: a bearing not on the simple fact of the appreciation of gold, but on the social consequences which are said to flow from it, and therefore on the questions of policy which are here under consideration. A moment's thought will show, for example, that a general increase in the efficiency of labor affects very materially the mode in which a fall in prices acts on the relations of debtor and creditor. If A borrows from B a hundred dollars,

repayable in five years, and if at the end of the five years prices in general have fallen to one-half of the previous rates, B, in paying back to A the one hundred dollars, clearly returns twice as many commodities as he got. But if, at the same time, the efficiency of labor has been doubled by improvements in production, B can produce with the same labor twice as many commodities as before; and he returns to A the product of the same quantity of labor as he received. The classic economists and the socialists (at least some schools of socialists) have maintained alike that the ideally perfect standard of justice in the exchange of commodities and services is equality of sacrifice or labor; that if things so exchanged for each other that equal sacrifice got the same reward, complete justice would be attained. Applying this test to the relations of debtor and creditor in the case supposed, we find it not one of hardship to the debtor, but apparently one of justice to both parties. It is true the creditor gets more commodities than he gave; but he gets the product of the same amount of labor as he devoted to the commodities originally lent; and why should he not share with the rest of the community the benefits of a general increase in the productiveness of labor?

This line of reasoning will become simpler and more concrete if we approach it from another point of view. Reference has already been made to the most striking and important exception to the general tendency of prices to fall, namely, that money wages and incomes in all civilized countries have shown a tendency not to fall, but to rise. Whether the incomes of the rich have increased faster than those of the poor, or whether the movement has shown itself

with rough uniformity for all classes, is immaterial for the present discussion. The admitted fact of a general upward movement alike among rich, middle class and poor, is the significant thing. In other words, there has been an inverse movement of money wages and of the prices of commodities, the one going up while the other went down. Now, such an inverse movement is what must take place in case of any real improvement in material welfare. The only concrete way in which civilized people can become better off, is by being able to buy more,—by their money incomes going further in the purchase of commodities. The improvement may take the form either of higher money incomes, with stationary prices; or that of stationary incomes, with lower prices; or the intermediate form which in fact seems to have occurred, of money incomes rising somewhat and prices at the same time falling somewhat. If we assume a monetary supply that is limited, or does not increase as fast as improved means of production cause the quantities of commodities to increase, one or the other of the two forms last mentioned must be found.[1]

In such a state of things there can hardly be said to be any real hardship for the debtor. It is true that prices have fallen, and that the money he repays the creditor will buy more goods than it did when the loan was contracted; but his own money income has risen, or at least has not fallen, and the repayment of the loan can cause him no special

[1] Such an inverse movement of general wages and prices was predicted by Cairnes before the bimetallic controversy had attracted general attention to the problem; see his *Leading Principles of Political Economy*, Book II, ch. II, §8.

hardship,—none greater than he must have expected. The case clearly differs fundamentally from that of a simple rise in the value of money, or general fall in both prices and wages. In the latter case, money incomes as well as the prices of commodities fall, and the debtor really pays back more than he got, not only in terms of commodities, but in terms of labor or sacrifice or income. This result ensues, for example, whenever there is the return to specie payments from a period of excessive paper money issues, such as the United States went through after the civil war. The return to specie payments, and the general fall in both prices and incomes, then meant an increase in the burden of debts contracted in the time of inflated paper prices. The return to specie payments, instead of taking place quickly and decisively after the financial stress of the war ceased, was postponed, and was not finally accomplished until 1879. In the years before the crisis of 1873, when the paper issues were still excessive, and other causes also helped to keep prices high, borrowing took place on a large scale,—borrowing by farmers and individuals, as well as by large corporations. The general fall which began even before 1873, and became great after that year, undoubtedly increased the burden of these debts, adding another illustration of the evils which ensue from the excessive issue of inconvertible paper money. The harsh experience of that time undoubtedly did much to strengthen the inflationist movement; and the after-effects of it, as well as the memory of it, contribute to the silver agitation of the present. But the fall in prices in the United States since 1879, and that in European countries in

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the period since 1873, are the result, on the whole and in the long run, of very different causes. They have been due chiefly to the general improvements in production; they have not been accompanied by a fall in money incomes, and they cannot be said to have caused an increase on the burden of debtors.

The reasoning of the preceding paragraphs bears also on the second part of the bimetallist indictment,—that, namely, as to the depressing effects of falling prices on industrial enterprise. Whether a simple rise in the value of money, unaccompanied by any other circumstance, would have the depressing effects which the bimetallists predict and the classic economists deny, is a question radically different from that which in fact presents itself. It may be that in this simple case the bimetallists might prove to be, in some degree at least, in the right, and that the classic reasoning, here as on many other subjects, while sound in the long run, would need some qualifications and correction. In the long run, no doubt, it is immaterial whether prices are high or low, whether money returns fall or rise; and yet it might turn out that the habitual association of gain or loss with "making money" would cause a period of simple falling prices to be one of hesitating investment of capital and unenterprising conduct of business. But what the world in fact has seen has been the complex case of a fall in prices accompanied by great improvements in production. The business man and capitalist has had, to be sure, to deal with falling prices; but the same amount of capital and labor has turned out more commodities than before; and his total money returns, so far from declining, have

generally increased. The money incomes of the managers of industry have shown the same upward movement as the money incomes of other classes in society. So long as this is the case, it is idle to talk of a depressing effect on enterprise from the fall in prices, or of a strangling of the industrial organism from insufficiency of the circulating medium. In fact, the immediate cause of the fall in prices has been the pushing on the market for sale of larger and larger quantities of commodities, produced with profit at lower and lower cost: a state of things fortunate for the community, and surely not depressing for the business man. No doubt the fall in prices has been depressing to those producers who were not so shrewd or so fortunate as to possess themselves of the improved means of production, and who have had to sell the same quantity of goods, brought to market at as high a cost as ever, at lower prices than before. But these unlucky or incompetent persons would have had to go to the wall in any case, whether prices maintained themselves or went down, and their case does not represent the general trend of industrial operations.

This effect on the entrepreneur of improvements and of falling prices combined, doubtless accounts for the failure of the bimetallist agitation to secure any appreciable hold in the business world. The bimetallists, both in England and on the Continent, have labored zealously to engage support among the business men, but never with a degree of success at all proportionate to the energy displayed. The simple reason is that the business world has not been in any state of chronic depression. In the ups and downs of industrial activity there have been periods

which seemed to confirm the pessimistic accounts of the bimetallist and of other persons malcontent with the present order of things; but in due time the tide has always turned. The industrial situation, while far from perfect in the eye of the social philosopher, and by no means warranting any confident optimism as to the final outcome, has certainly not been such as to dissatisfy the active manager of industry, or to check his ambition or enterprise.

On the whole, then, the fall in prices, when considered in connection with the other great changes which have accompanied it, does not afford so much countenance to the bimetallist proposal as at first sight it seems to. The rise in money incomes and the improvements in production disprove any intolerable burden on debtors, and make it highly improbable that the change has had any general depressing effect on industry.

III.—The Case of the Farmer.

Nevertheless, there is something more to be said, in explanation and justification of the discontent with falling prices, and of the silver agitation which rests on that discontent. While the effects of the fall in prices on debtors as a class and on producers as a whole have not given real grounds for complaint, certain particular debtors and producers have undoubtedly been injured. The case of these latter have given plausibility to the general arguments of the bimetallists, and, what is more important at the present juncture, has given strength to the movement in the United States for more money and more silver.

The situation will be best understood if we contrast for a moment the different modes in which the improvements in production have been brought about in manufacturing industries on the one hand, in agriculture on the other hand. In manufactures the improvements have been better machinery, new processes, labor-saving inventions, the conduct of business on a larger scale, and so the greater and more effective division of labor. In agriculture the main cause of cheaper production has been different: it has been the opening up of new lands and new sources of supply. No doubt there are important exceptions to these general statements. In agriculture there have been advances in the arts,—new plants, better fertilizers, improved implements, more effective ways of cultivating the soil. In manufactures, on the other hand, there have been important changes due to the discovery of new and rich mines of materials, such as coal, iron, copper. But on the whole, the difference holds good. In agriculture undoubtedly the opening of new lands through the improvements in transportation has been the most important single cause at work. The cheapening of agricultural products has been due not so much to the more effective use of the soil already under cultivation, as to the development of soil not formerly available for the supply of the market.

The changes in production and prices have consequently affected the producers in these two branches of production in very different ways. In manufactures all alike have felt them, and have been able to accommodate themselves to the effects. No doubt the shrewder producers adopt improvements and new

inventions first, and, so long as they keep in the lead, have the advantage of their competitors. They gain by doing a large business at lower prices, while for the time being their slower competitors lose. But new processes and new inventions spread over the whole field in no long time. The opening of a new source of supply, on the other hand, cheapens production through a process which the holders of the old source of supply cannot avail themselves of. If wheat is raised in large quantities in Dakota, the price goes down as effectively as if the wheat fields of England and New York had suddenly become more fertile; but as those wheat fields produce no more than before, the farmer or land owner on the old soil has nothing to offset the lower price. This is the explanation of the agricultural distress of which so much has been heard in Europe in recent years, and which has been the main occasion of the revival of protectionist feeling in France, Germany, and other countries of the Continent. The farmer on the old lands does not find in improvements in production any compensation for lower prices. If he owns the land, he must pocket the loss, and perhaps in the end abandon his land and turn to something else; such has been a common case in New England. If he is a tenant on the land, he will probably, after a period of struggle and hardship, get lower rents, leaving the landlord as the permanent sufferer; such has been the outcome in old England. If he was in debt before the change took place, he will find his debts growing more burdensome as his money income goes down: such has been the result with many a western farmer.

It is in causes of this sort that we find the explanation, in part at least, of the restlessness among the western farmers of which the silver agitation is one sign. The fall in the prices of wheat, corn, and other staples, has been due to enormously increased production in regions which were formerly out of reach of the market: in India, Australia, Russia, as well as in California, Dakota, Washington, Oregon, and the far West generally. In the states where the land has been under cultivation for a generation, like Michigan, Wisconsin, Indiana, Illinois, Iowa, Missouri,—almost the whole of the Mississippi valley proper,—the fall in the prices of agricultural staples has meant a serious loss to the farmer, and serious embarrassment to him if in debt. He had expected with a bushel of wheat to meet a dollar of interest or repay a dollar of principal; he finds he needs two bushels. It is not surprising if in the United States he wants higher prices to be attained by the issue of more silver or more money of some sort, and if on the Continent of Europe he asks for protective duties on the products which stream in from distant countries.

We touch here the question, so much discussed of late, as to the causes of the recent agricultural depression in the United States. That depression has been by no means due exclusively to the change in production and prices just described. Other causes must be taken into account if the situation is to be fully and fairly explained; and a few words in regard to them will not carry us too far from the main subject of this paper.

In the first place, it is probable that some of the complaints in regard to the burden of debt

on the farmers are simply a legacy from the old days of inflated paper money. Not a few of the debts of the present go back to the years before 1870, when we had prices high in terms of over-issued paper money. These debts have been renewed and continued, in whole or in part; and the fall in prices has made them heavier and heavier to bear. The evil here again is real, and a remedy is now hard to find. The only conclusion which can be laid down with perfect conviction is that we should make sure of preventing the recurrence of a new era of excessive paper money.

Next, the fall in prices happens to have been intensified in the last few years by one of those periodic stages of general depression which have recurred again and again in our economic history. The process of settling the country and taking up the new lands of the United States has never taken place by regular and steady steps. It has taken place by spells of great activity, accompanied by land speculation and rapid railway building, followed by periods of dullness and reaction, in which the advance for the time being has almost ceased. At intervals of ten years, more or less, the population has gone West *too fast*, and then has waited to recover and take breath for a new effort. In general, the tendency has been to take up new lands quite as fast as, if not faster than, there was profitable use to be made of them. The desire to secure the almost certain future rise in value has caused men to appropriate land and use it before the world really needed its product. Such a rapid advance seems to have taken place in the years 1887 and 1888, indicated by the enormous railway building and the

rapid increase in the population of the far West. The usual reaction has followed, with its lower prices of agricultural products and of farming land. Some part of the agricultural depression of 1889 and 1890 represents no more than this periodical downward turn. The next turn upward may be expected to come in due time; and with it we shall probably hear less of depression in farming, and may expect the silver agitation, the Farmer's Alliance, and kindred movements, to wane and perhaps to disappear entirely.

Still another important circumstance is the general transition in agricultural methods inevitable in those western states which have been settled for a generation or more. When new land is first taken into cultivation the most effective use of it is found in the continuous production of some staple crop like wheat and corn, which can be grown, so long as the cream of the soil is not exhausted, year after year with large returns. After a while, however, the land begins to show signs of exhaustion. The staple crops do not yield as largely as before, and less crude methods of using the soil must be resorted to. Manures have to be applied, and the rotation and selection of crops practised. Meat and dairy products, vegetables, fruits, and the miscellaneous agricultural articles, must take their place in rural economy. This change has been carried through very largely in states like New York, Pennsylvania, and Ohio. In the heart of the Mississippi valley it is now under way; but the transition is trying, and to some of the farmers it is impossible. A good share of the American agricultural population has been so steadily bred to the easy and careless

use of virgin soil that it cannot accommodate itself to more intensive methods. It is constantly moving westward; settling for a generation in one spot, and then, as the land shows signs of exhaustion, moving farther west. The more intelligent and versatile stay behind, adapt themselves to new conditions, and in time prosper under them. The least active also stay behind, and flounder hopelessly in the old ways. But a large number are always moving West. In every state between the Alleghanies and the Missouri river there are large tracts formerly cultivated by native settlers, who have sold their lands, as they showed signs of giving out, to German or Swedish immigrants. These latter have not infrequently paid good prices for the lands: but they have been bred to intensive farming, to careful and varied use of the soil, and they have prospered where their native predecessors have been unwilling or unable to adapt themselves to the new conditions. The period of transition is a hard one for all of the native farmers, whether they stay behind or move on, and the lesson of using the soil with more skill and care is learned only under the pressure of necessity. In such periods all sorts of remedies for hard times make their appearance and have their run.

IV.—The Silver and Gold as Standards of Value.

The simple answer to those who propose a greater use of silver as money has been given in the preceding pages. They have not made out their case against the existing order of things. There are no serious evils due to an insufficient supply of money.

General depression does not exist. Debtors as a class are suffering no hardships. The agricultural depression is not due to the general fall in prices, but to the particular mode in which the changes in the production in agricultural commodities have been brought about, reinforced in the United States by some other causes in no way connected with the currency situation.

These negative reasons apply to the arguments both of those who favor international bimetallism and of those who urge the independent use of silver by the United States. When we consider the importance not only of stability in the medium of exchange, but of general confidence in that stability, the negative reasons ought to suffice for rejecting the proposals of the silver advocates. But there are positive reasons in addition.

The eventual effect of a silver standard, as we have seen, must be to cause a general rise in prices. The rise, no doubt, would not be immediate, and the change not so prompt or its effects so directly felt as is generally predicted. But come it would; and the phenomena of rising prices and incomes would in due time appear.[1] If the present tendency to falling in prices, with stationary or rising money incomes, which are the characteristic features of things as they are, work no hardship to debtors, the contrary case of rising prices and rising money incomes must work hardship to creditors. No doubt that hardship

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[1] It is conceivable that the rise in prices might be counteracted to some extent by that more easy and abundant production of commodities which now causes the tendency to fall. But this cause works out its results very slowly,—more slowly than the silver issues might be expected to work out their effects in the direction of rising prices.

is not so easily seen in the case of a gradual and uneven rise in prices, as it would be if there were an immediate jump of 20 per cent. in all prices. But it is none the less real and serious. With money incomes rising more decidedly and rapidly than they have been rising of late years, debtors would find it easier to discharge their obligations. Creditors, receiving the same amount of money as they had given, would find the purchasing power of that money lessened. Not only would they be debarred from that participation in the improvements in production which the present conditions give them, but they would find their possessions, in terms of commodities, cut down by the extent of the general rise in prices.

If we consider now not only the effects of a silver standard on the relations of debtors and creditors for the time being, but its working as a permanent measure, after the period of transition is past, we find further positive reasons against its adoption. These lie in the conditions of the production and use of silver at the present time. It would carry us too far to enter on any detailed discussion of the history and prospects of the production of silver; the salient and important facts can be stated in a few words. The total production of silver has quadrupled within the last three decades, and more than doubled within the last two decades; and in the five or ten years of the immediate past there have been no signs of a relaxation of the rate of increase. The figures below, which state the average annual production for five-year periods from 1851 to 1885, and the

annual production in each year since 1885, tell their own story:[1]

The average annual product of silver in	1851-55 was	886	thousand kilograms.
" " " " " "	1856-60 "	905	" "
" " " " " "	1861-65 "	1,101	" "
" " " " " "	1866-70 "	1,339	" "
" " " " " "	1871-75 "	1,969	" "
" " " " " "	1876-80 "	2,450	" "
" " " " " "	1881-85 "	2,862	" "
The product in the year	1886 was	3,021	" "
" " " "	1887 "	3,324	" "
" " " "	1888 "	3,673	" "
" " " "	1889 "	4 237	" "
" " " "	1890 "	4,600	" "

How long and how fast this extraordinary increase will continue, it is impossible to say. Geologists are disposed to believe that it will not continue very long; but for recent years the hard facts of experience are against them. Certainly the indications for the immediate future point to a further increase in the total amount of silver mined.

Meanwhile, the monetary field over which this growing volume of silver can spread is very

[1] I have used the figures of Professor Soetbeer, as given in his *Materials on the Silver Question* and continued in the *Jahrbücher für Nationalœkonomie*, vol. I (3d series), p. 561. His estimates are slightly larger than those of the Director of the United States Mint, who puts the product in 1889 at 122.8 million ounces troy, equal to about 4,000,000 kilograms; against Soetbeer's estimate of 4,237,000 kilograms in 1889. The difference arises chiefly because Soetbeer puts a higher estimate than the Director of the Mint on the product of the minor countries, *i. e.*, those other than the United States and Mexico. As to the rate of increase in the total product, the two authorities agree.

The United States mine about two-fifths of the total product of silver, and under the act of 1890 buy almost exactly the same amount. The Director of the Mint estimates the silver product of the United States in 1890 at fifty-four million ounces, exactly the amount which the Treasury is required to buy each year under the present law.

limited. In this regard there is a vital difference between the present silver situation and the gold situation at the time of the great gold discoveries of 1848–50. From 1850 to 1860 the production of gold increased at an unexampled rate; but practically all the mints of the civilized world were then open to it, while the half-civilized countries also absorbed large quantities. At the present time the United States is the only civilized country which coins silver except as a subsidiary coin, or which proposes to do so. The countries in which silver is freely coined are India, Mexico, Japan, and a few South American countries. The field for the use of silver in these countries is considerable; but it is at least doubtful whether they will absorb the steadily growing product at existing prices. The United States, at all events, is the one civilized country in which there is a serious proposal to take the risks which lie in the future production and value of silver, and to rest the circulating medium on a basis so narrow and unstable.

On the other hand, gold is freely coined, and is now the basis of the medium of exchange, in all civilized countries. The wider the field over which a given medium of exchange is used, the less likely is it that changes in its quantity will affect its value. The wide use of gold among the countries with which our commercial relations are most intimate and important gives a guarantee that no great and violent fluctuations will take place in its value, or in the general range of prices which in the present long run is determined by its value; a guarantee which we should certainly not have if the United States alone were to use silver.

In fact, gold performs the functions of a measure of value and of a standard of value with as close an approach to perfection as there is any reasonable ground for expecting from any monetary system. Fluctuations in general prices no doubt take place under it; especially the fluctuations due to the variations in the volume of credit currency outstanding, such as have been referred to frequently in the preceding pages. But these are inevitable under any system of coinage; and they are certainly mitigated in their effects by the use of gold as a basis, since the easy flow of that metal from country to country serves to correct sooner or later any exceptional rise or fall in an individual country. Over long periods of time, and for the whole civilized world, we have had, in recent years, that general downward movement of prices, connected with the general improvements in production, as to which I have already stated the reasons for not thinking the working of the gold standard to give grounds for serious complaint. The same trend of events may be expected as far in the future as we can make any sort of prevision. All the indications, so far as we can see, are that the advance in the arts will not relax, that commodities will be produced more and more cheaply and abundantly, that the general trend of prices in civilized countries will be downward, while money incomes will continue to be stationary or rising. The present monetary situation, and that for the visible future, seem to be on the whole satisfactory.

For this reason the schemes proposed by various eminent economists for a tabular or multiple standard of value, do not seem to me to be called for by any serious exigency not met by the maintenance of

the gold standard; apart from the fact that the habits of the people and the difficulties of securing accurate gauges of general changes in prices make these schemes in any case quite impracticable. The only contingencies with which the gold standard does not deal to reasonable satisfaction are those that may arise in connection with contracts running over very long periods of time. When a government incurs a huge national debt, with no expectation or intention of paying it for centuries to come; or when a railway company, to cite a recent case, issues bonds payable after the lapse of a hundred years,—chances are taken as to the economic developments of the future which must remain chances whatever the way in which the contract is framed, whether for payment in gold, or silver, or grain, or by a multiple standard. There is only one certain way of guarding against the difficulties that may arise from such contracts,—to make none of them.

Lastly, there is an objection to a change to a silver standard, or to any proposal of the sort, less tangible perhaps than those stated hitherto, yet more important and fundamental. It is an objection to the *morale* of the thing: to the disposition to tinker with the currency as a remedy for real or fancied evils. The present agitation in the United States for the use of silver is not the result of those considerations which have been discussed in this paper, and which have moved economists of eminence to advocate bimetallism. The reader may have been struck by the fact that the reasoning of the preceding pages touches only a small part of the ordinary arguments advanced in th. coun-

try by the silver advocates. Most of their arguments are for an increase in the currency on general principles. These apply in favor of the issue of a flood of paper money as readily as they do in favor of the silver standard, and are mingled with schemes that can have no respectable backing, like that for government issues on the pledge of grain or land. Such reasons of real weight as may be advanced in favor of bimetallism are not to be rejected merely because they keep bad company. But the general character of the present silver agitation is certainly a strong argument against it. It is born of restlessness and ignorance. Whenever an era of real or apparent depression sets in, some portion of the community ascribes it to a single cause,—the tariff, the railways, the currency,—and looks for great things from the removal of that one cause. The most common panacea is the increase of the currency; and the silver agitation is only one form of the resort to this panacea. No lesson just now is more important for American democracy than that stability is the first quality needed in the medium of exchange, and that only harm can result from experimenting with it, and looking to changes in it for the cure of real or fancied evils.

V.—The Expansion of the Currency.

In conclusion, we may take up the question of the expansion of the currency of the United States, and the mode in which the circulating medium may best be made to accommodate itself to the growing wealth and transactions of the community. So far as the past is concerned, the evidence is ample that

the circulating medium has grown regularly and steadily, and has not left the people of the United States with any dearth of means for carrying on their exchanges. The circulating medium of a country like the United States consists of two different kinds. The one, which I have called large change, serves for every-day retail transactions; the other carries on the larger exchanges, chiefly of wholesale trade and production. We have seen, in the first part of this paper, how rapid and steady has been the increase in the supply of large change. Equally rapid, and even more striking has been the increase in the medium of exchange for large transactions. That medium, to repeat once more, is to be found in bank deposits, bank checks, and bank clearings. The volume of these has shown, year by year, a steady and rapid increase. Since 1878 the volume of individual deposits in national banks alone has more than doubled, rising from an average of six hundred and fifteen miilions in 1878 to an average of over fifteen hundred millions in 1890.[1] An increase at a rate even more rapid has

[1] The individual deposits in the national banks, on or about October 1, have been as follows since 1878:

1878	620.2	millions.
1879	719.7	"
1880	873.5	"
1881	1,071.0	"
1882	1,122.5	"
1883	1,049.4	"
1884	975.2	"
1885	1,102.4	"
1886	1,173.0	"
1887	1,249.5	"
1888	1,350.3	"
1889	1,475,5	"
1890	1,521.7	"

These are the figures as to the national banks only; to which must be added the deposits in state and private banks. For an estimate of the growth of deposits in all banking institutions, see the *Quarterly Journal of Economics*, vol. I, p. 408, and vol. V, p. 240.

taken place in the deposits in state banks and trust companies. These institutions, and especially the trust companies, play a much more important part in the mechanism of exchange now than they did in 1878; and their deposits in 1890 amounted to nearly nine hundred millions. The accurate figures which we are so fortunate as to possess in regard to the operations of the national banks show that this form of currency has accommodated itself closely to the growth of business transactions: rising rapidly from 1878 to 1882, slackening with the period of depression which was marked by the panic of 1884, and again rising regularly in the last five years. This part of the circulating medium, at any given time the most important and effective in the whole, will grow in the future as it has grown in the past; and in this direction we may be sure that there will be no failure of the medium of exchange to grow in response to increasing business transactions.

As a basis for deposit and check currency, a certain amount of cash must be kept in bank reserves. That cash in European countries consists mainly of gold; and since the resumption of specie payments,[1] it has been made up mainly of gold in the banks of the United States also. But it cannot be said that the world finds its supply of gold inadequate for this purpose. A comparatively small amount of gold suffices, and all the evidence goes to show that there has been no difficulty in securing enough. The holdings of gold in the reservoirs of the great banks, so far from declining, have shown a considerable

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[1]Or rather, since the great inflow of gold into the United States in the years 1880–81, which was the main cause in bringing about the large holdings of gold by the banks of the United States.

increase; and that this increase has not been due to any struggle for gold, and has not been accompanied by any disturbing effects, is shown conclusively by the fact that the rate of discount has not been high and has not shown any unusual fluctuations.[1]

So far as that other part of the currency which I have called large change is concerned, it is true that the direct use of gold coin in all civilized countries, or even in the United States alone, would absorb more gold than the annual production could easily supply. The question is, what form of currency, resting on a gold basis, shall be used to supply that need? Ideally, the best currency of this sort consists of bank notes, issued under conditions insuring beyond doubt both ultimate payment and immediate redemption in specie. This form of large change adapts itself most readily and easily to the needs of the community, and offers least opportunity and temptation for issue to excess. Until within recent years it might have been expected that the United States would in the end look to the National Banking System for the supply of this sort of money. But the outlook now is that the national bank notes will be permitted to occupy the field only in very small part. The extent to which the silver issues have already gone, and the temper of the West and South, make it certain that for a long time to come

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[1] I have stated my conclusions on this subject in general terms, it not being within the scope of the present paper to enter into the details of the complicated questions here touched on. Reference has already been made to Soetbeer's important "Materials on the Silver Question," where the facts up to 1885 are presented. An admirable discussion of the details of the subject is in two papers by the late Professor Nasse, in the "Jahrbücher für Nationaloekonomie," vol. 51 (1888).

resort will be made to government issues resting mainly on a silver basis.

The practical problem, then, is how best to make these issues in some sort elastic, and to prevent their being made in greater amounts than can be readily maintained equal in value to gold. The simplest and most promising plan for accomplishing these objects seems to me that proposed in 1887 by the then Secretary of the Treasury, Mr. C. S. Fairchild. His suggestion was made at the time when the act of 1878 was still in force, and when the silver issues were mainly in the form of silver certificates of the older sort; but the essential features of the scheme could be applied easily to the present Treasury notes, or indeed to any issues. Briefly, the scheme, as stated with reference to the act of 1878, was to do away with the mechanical limitation of the issues to the fixed amount of two and a half millions per month. Let the issues be subject to no other limit than that they should cease whenever the dead silver accumulated in the Treasury up to a certain amount. In other words, let the issues be in such amounts as would remain in steady circulation for actual use: those amounts being determined, as we have seen, by the occasion for the use of large change in the community. Whenever the back-flow of silver currency into the Treasury, and the consequent accumulation of dead silver, indicated that more was being put forth than the community would use, the issues should cease. The plan has the political and tactical advantage of offering on its face to give the people all the money they want and will use; a feature which makes it comparatively easy of attractive presentation in those parts of the country

in which any direct limitation of the currency is likely to be attacked as a machination of the creditor class. It ensures a reasonable degree of elasticity in the government issues. So long as the Treasury maintains a considerable reserve of gold, and the banks conduct their business with reserves and clearing-house payments based on gold, it offers little danger of depreciation or of a disturbance of the gold standard. No doubt it is open to the objection that the limitation may be done away with, and that any wave of unusual depression may lead to renewed agitation for the favorite panacea of more money. But this is the fundamental objection to all and any form of direct issue by governments of money resting on its credit; and it is one which the United States must face in any event. On the whole, Mr. Fairchild's plan seems to combine the greatest political advantages and the largest attainable security for a sound currency.

On the Shifting and Incidence of Taxation.